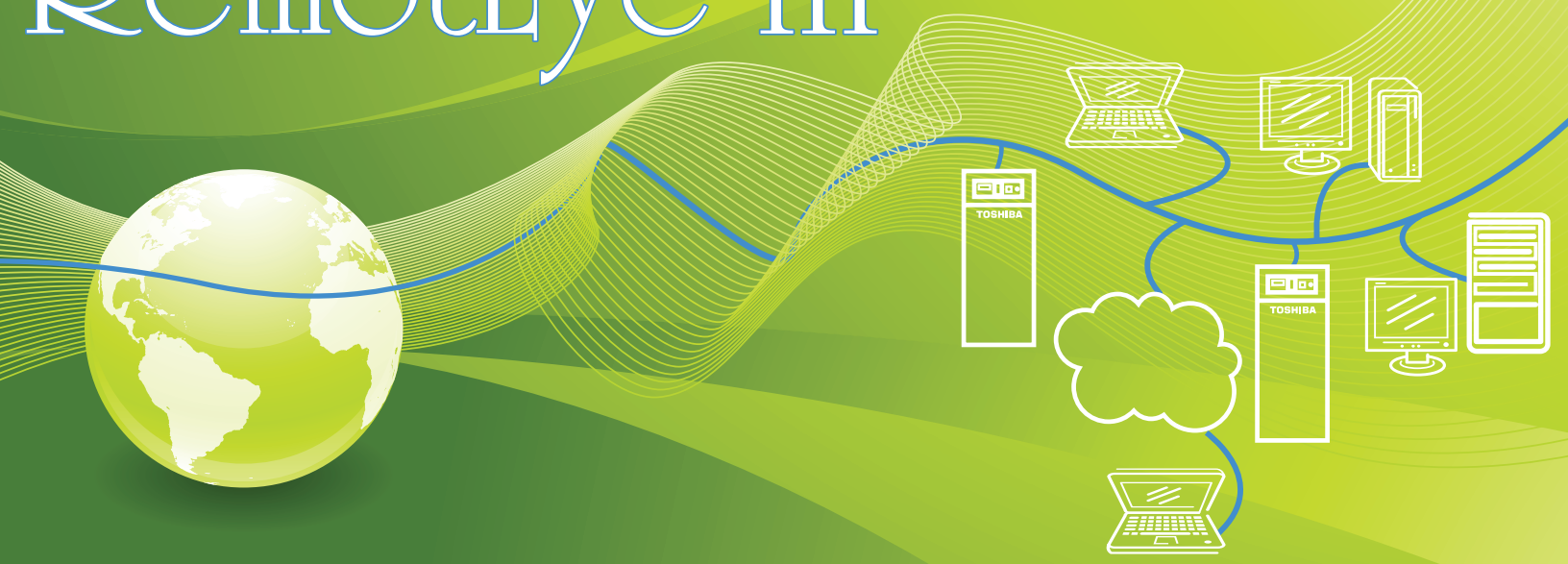
TOSHIBA

Leading Innovation >>>

RemotEye® III



www.toshibaups.com

RemotEye® III

User Manual
Document Number: 62330-000
June 2010

6/17/10

About This Manual

This manual was written by the TOSHIBA Engineering and Marketing Groups. These groups are tasked with providing technical documentation for the RemotEye III system. Every effort has been made to provide accurate and concise information to you, our customer.

This manual provides information on how to safely install, operate, and maintain your RemotEye III system. This manual includes a section of general safety instructions that describes the warning labels and symbols that are used throughout the manual. Read the manual completely before installing, operating, or performing maintenance on this equipment.

The information in this manual is subject to change without notice.

The Toshiba International Corporation shall not be liable for direct, indirect, special, or consequential damages resulting from the use of the information contained within this manual.

This manual is copyrighted. No part of this manual may be photocopied or reproduced in any form without the prior written consent of the Toshiba International Corporation.

TOSHIBA is a registered trademark of the TOSHIBA Corporation.

RemotEye is a registered trademark of the Toshiba International Corporation.

All other product or trade references appearing in this manual are registered trademarks of their respective owners.

© Copyright 2010 Toshiba International Corporation.

All rights reserved.

Contacting TOSHIBA's Customer Support Center

TOSHIBA's Customer Support Center can be contacted to obtain help in resolving any RemotEye III system problem that you may experience or to provide application information.

The Support Center can be reached at 877-867-8773 (toll free) or 713-466-0277. The center is open from 8 a.m. to 5 p.m. (CST), Monday through Friday.

Email at: *toshiba1ups@tic.toshiba.com*

You may also contact TOSHIBA by writing to:

TOSHIBA International Corporation

13131 West Little York Road

Houston, Texas 77041-9990.

For further information on TOSHIBA's products and services, please visit our website at HTTP://WWW.TOSHIBA.COM/IND.

Important Notice

This user manual may not cover all of the variations in equipment, nor may it provide information on every possible contingency concerning installation, operation, or maintenance.

The contents of this manual shall not become a part of or modify any prior agreement, commitment, or relationship between the customer and the TOSHIBA International Corporation's UPS Division. The sales contract contains the entire obligation of the TOSHIBA International Corporation's UPS Division. The warranty contained in the contract between the parties is the sole warranty of the TOSHIBA International Corporation's UPS Division, and any statements contained herein do not create new warranties or modify the existing warranty.

Any electrical or mechanical modifications to this equipment without prior written consent of the TOSHIBA International Corporation will void all warranties and may void the UL/CUL listing or other safety certifications. Unauthorized modifications may also result in equipment damage or personal injury.

When used on UPS supporting safety critical equipment, carefully analyze the impact of allowing remote access of the UPS control features.

Table of Contents

About This Manual 2
Contacting TOSHIBA's Customer Support Center 3
Important Notice 4
Important Safety Instructions *11*
Introduction 13
Package Contents *14*
Installation 17
System Compatibility *17*
Installing RemotEye III *17*
Making the Network Connection *18*
Configuration 19
Preliminary Issues *19*
Configuring the RemotEye III via Terminal *20*
Connecting to the RemotEye III via Terminal *21*
RemotEye III Configuration Menu Navigation *23*
Configuring the RemotEye III via Telnet *36*
Connecting to the RemotEye III via Telnet *38*
RemotEye III Telnet Menu Navigation *38*
Configuring the RemotEye III via HTTP *39*
Connecting to the RemotEye III via HTTP *40*
RemotEye III Web Menu Navigation *41*
UPS Monitoring *41*
UPS Management *55*
Email Notification *63*
EMD Management (Environmental Monitoring Device) *65*
RemotEye III Management *67*
History Data & Logs *74*
Configuring the Remoteye III via SNMP *83*
Connecting to the RemotEye III via SNMP *89*
Toshiba RemotEye Application Program 105
Toshiba RemotEye Client Software *105*
Auto Save-Log Software *120*
Upgrade RemotEye III *124*

Hardware Specifications 128
RemotEye III Feature Summary *128*
System Specification *129*
Firmware Specifications *129*
LED Key *130*
Jumper Setting *131*
DIP Switch Setting *132*
LAN connector (J2) *132*
Console connector (J3) *133*
Gold Finger GF1 *133*

Figures

Figure 1: RemotEye III Circuit Card 14
Figure 2: RemotEye III in 1600XP UPS 17
Figure 3: Console Login Screen 21
Figure 4: Console Main Menu 22
Figure 5: Console Main Menu Description 25
Figure 6: Console Configuration Menu Description 26
Figure 7: Console System Group Menu Description 27
Figure 8: Date & Time Menu Description 27
Figure 9: Console Control Group Menu Description 28
Figure 10: Console Parameter Group Menu Description 29
Figure 11: Console Email Group Menu Description 30
Figure 12: Console EMD Group Menu Description 31
Figure 13: SNMP Communities Description 32
Figure 14: SNMPv3 USM Menu Description 33
Figure 15: Console Trap Receiver Table Description 34
Figure 16: RemotEye III HTTP Page 40
Figure 17: HTTP Monitor Screen 81
Figure 18: HTTP History Data Screen 82
Figure 18: Toshiba RemotEye Client Software 105
Figure 20: HTTP Connected Client Table 107
Figure 21: Toshiba RemotEye Client Software 108
Figure 22: Toshiba RemotEye Client Software Shutdown Warning Message 109
Figure 23: MMC window 118
Figure 24 Save Log Utility window 120
Figure 25: Save Log Utility window with RemotEye data 122
Figure 26: Scheduling logs 123
Figure 27: Tupgrade, RemotEye III Upgrade Utility via Network 125
Figure 28: Tupgrade, RemotEye III Upgrade Utility via Serial 126
Figure 29: RemotEye III/Internal Top View 130

General Safety Instructions

DO NOT attempt to install, operate, maintain or dispose of this equipment until you have read and understood all of the product safety information and directions that are contained in this manual.

Safety Alert Symbol

The Safety Alert Symbol indicates that a potential personal injury hazard exists. The symbol is comprised of an equilateral triangle enclosing an exclamation mark.

SIGNAL WORDS

Listed below are the signal words that are used throughout this manual followed by their descriptions and associated symbols. When the words DANGER, WARNING and CAUTION are used in this manual they will be followed by important safety information that must be carefully adhered to.

The word DANGER preceded by the safety alert symbol indicates that an imminently hazardous situation exists that, if not avoided, will result in death or serious injury to personnel.

DANGER

The word WARNING in capital letters preceded by the safety alert symbol indicates that a potentially hazardous situation exists that, if not avoided, could result in death or serious injury to personnel.

WARNING

The word CAUTION or ATTENTION in capital letters preceded by the safety alert symbol indicates that a potentially hazardous situation exists which, if not avoided, may result in minor or moderate injury.

CAUTION / ATTENTION

The word CAUTION in capital letters without the safety alert symbol indicates a potentially hazardous situation exists which, if not avoided, may result in equipment and property damage.

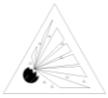
Special Symbols

To identify special hazards, other symbols may appear in conjunction with the DANGER, WARNING and CAUTION signal words. These symbols indicate areas that require special and/or strict adherence to the procedures to prevent serious injury to personnel or death.

Electrical Hazard Symbol

A symbol which indicates a hazard of injury from electrical shock or burn. It is comprised of an equilateral triangle enclosing a lightning bolt.

Explosion Hazard Symbol



A symbol which indicates a hazard of injury from exploding parts. It is comprised of an equilateral triangle enclosing an explosion image.

Equipment Warning Labels

DO NOT attempt to install, operate, maintain, or dispose of this equipment until you have read and understood all of the product warnings and user directions that are contained in this instruction manual.

DO NOT remove or cover any of the labels. If the labels are damaged or if additional labels are required, contact your Toshiba representative for additional labels.

Labels attached to the equipment are there to provide useful information or to indicate an imminently hazardous situation that may result in serious injury, severe property and equipment damage, or death if the instructions are not followed.

Important Safety Instructions

This manual contains important instructions that should be followed during the installation, maintenance, and operation of the UPS and its batteries to assure safe and proper operation.

Turn off, lockout, and tagout all power sources before connecting the power wiring to the equipment or when performing maintenance.

Unauthorized personnel should not service batteries.

Contact your nearest Toshiba authorized service center for battery replacement.

Qualified Personnel ONLY!

Qualified Personnel is one that has the skills and knowledge relating to the construction, installation, operation, and maintenance of the electrical equipment and has received safety training on the hazards involved (Refer to the latest edition of NFPA 70E for additional safety requirements).

Qualified Personnel shall:

Have read the entire operation manual of the system being serviced.

Be trained and authorized to safely energize, de-energize, ground, lockout and tag circuits and equipment, and clear faults in accordance with established safety practices.

Be trained in the proper care and use of protective equipment such as safety shoes, rubber gloves, hard hats, safety glasses, face shields, flash clothing, etc., in accordance with established safety practices.

Be trained in rendering first aid.

Be knowledgeable of batteries and the required handling and maintenance precautions.

WARNING

Misuse of this equipment could result in injury and equipment damage. In no event will Toshiba Corporation be responsible or liable for either indirect or consequential damage or injury that may result from the misuse of this equipment.

CAUTION

Installation Precautions

Install the unit in a well-ventilated location; allow at least 10 cm (4 inches) on all sides for air ventilation and for maintenance.

Install the unit in a stable level and upright position that is free of excessive vibration.

Install the unit where the ambient temperature is within the specified range.

Do not install the unit in areas that are subject to high humidity.

Do not install the unit in areas that allow exposure to direct sunlight.

Do not install the unit in areas that allow exposure to high levels of airborne dust, metal particles, or flammable gases.

Do not install the unit in areas near sources of electrical noise. Ensuring a proper earth ground will reduce the effects of electrical noise and will reduce the potential for electrical shock.

Do not install the unit in areas that would allow fluids or any foreign object to get inside the unit.

For further information on workplace safety visit www.osha.gov.

Introduction

Congratulations on the purchase of your new Toshiba Uninterruptible Power Supply (UPS) system management tool: the RemotEye III! The RemotEye III supplies a 10/100 base-T network card that allows network administrators to monitor and control Toshiba UPS systems remotely via Simple Network Management Protocol (SNMP) and Hypertext Transfer Protocol (HTTP) methods.

This user manual describes the configuration and operation of the RemotEye III. The RemotEye III is a circuit board that is inserted into the option slot of the UPS. The circuit board is connected to the UPS via the RemotEye III card edge connector.

Package Contents

Listed below are the items included in the RemotEye III package.

RemotEye III Contents

The RemotEye III printed circuit board.

PC cable, a DB9 female to RJ45 cable (Workstation COM port to RemotEye III COM port).

A CD-ROM containing the following:

The RemotEye III Quick Installation Guide.

RemotEye III User Manual

ToshibaRMTI3.mib

Tupgrade.exe, the RemotEye III upgrade utility,

Windows and UNIX Shutdown Clients Software

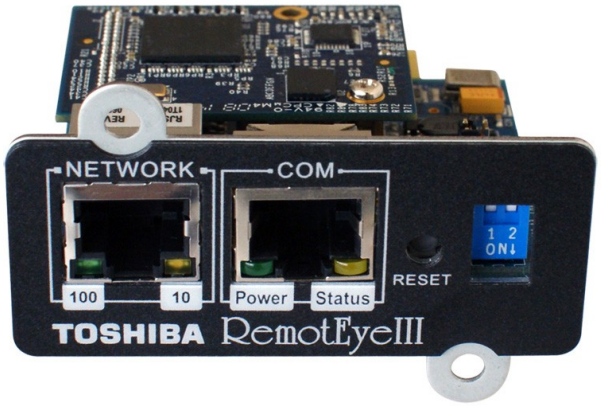


Figure 1: RemotEye III Circuit Card

RemotEye III Features

Included in the RemotEye III are several support options for managing Toshiba UPS.

BOOTP/DHCP Requests
The RemotEye III can automatically retrieve its network identity from a network server using the Boot Protocol (BOOTP) or Dynamic Host Configuration (DHCP) automatic configuration technique.

HTTP Web Access
Web access includes Secure Sockets Layer (SSL) Configurations. This allows users to access data from RemotEye publicly or privately using the web.

Telnet, Terminal Access
Telnet includes Secure Shell (SSH) protocol configuration.

SNMP Access
RemotEye III provides enhanced SNMP security with option of SNMPv3, default protocol is SNMPv1. It is compatible with the United States Standard UPS MIB, RFC1628 and also with Japanese Standard UPS MIB.

Additional features of the RemotEye III include:

Real-Time Clock
The RemotEye III contains its own RTC. This clock is used for time-stamping of its data log and for executing any scheduled events.

UPS Event Notification
RemotEye III sends out notification of UPS events via Email, SNMP Traps and Java Applets.

Graphic User Interface (GUI)
User-friendly GUI for web pages and Java applets

Power Quality Monitor
Java applets provide on-screen visual indication of power quality through dynamic graphics.

Versatile Remote UPS Management
Allows monitoring of the UPS via SNMP and HTTP communication. Also provides Java monitoring applets accessible through an internet browser.

Versatile UPS Configuration
RemotEye III has the ability to set the UPS parameters from any SNMP management station or through internet web browsers using HTTP forms and objects.

Data Log Retention
RemotEye III stores history file containing UPS power events, power quality, UPS status, and battery condition in non-volatile memory.

Automatic UPS Shutdown
The Toshiba RemotEye III Client Software provides unattended and on-demand UPS shutdown; either pre-programmed by the administrator or when the UPS reports a low battery condition.

RemotEye III also supports the following external applications:

Network Upgrade
Tupgrade.exe, a network upgrade utility, allows user to upgrade to a newer version of the RemotEye.

Auto Save Log
This utility allows users to save logs from several RemotEye(s) at the same time to a same or different computer.

Client Shutdown
The Toshiba RemotEye III Client Software can broadcast system failure messages via an IP (Internet Protocol) packet and perform unattended shutdown of up to 250 clients operating under a variety of platforms.

Environmental Monitoring Device (EMD) (Optional)
EMD allows monitoring of the environment temperature and humidity. It provides 2 dry contact closures that can be used for normally open, normally closed, active high, or active low contact closures. Alarms will be sent to RemotEye III as events.

Installation

System Compatibility

The RemotEye III supports the 1600XP Toshiba UPS system family:

Installing RemotEye III

Follow these steps to install the RemotEye III card.

1. Turn the UPS off using the proper shutdown procedure as explained in the UPS manual.
2. Slide the RemotEye III printed circuit board into the extension option slot of the UPS.
3. Secure the printed circuit board using the UPS supplied screws.(See Figure 2: RemotEye III)

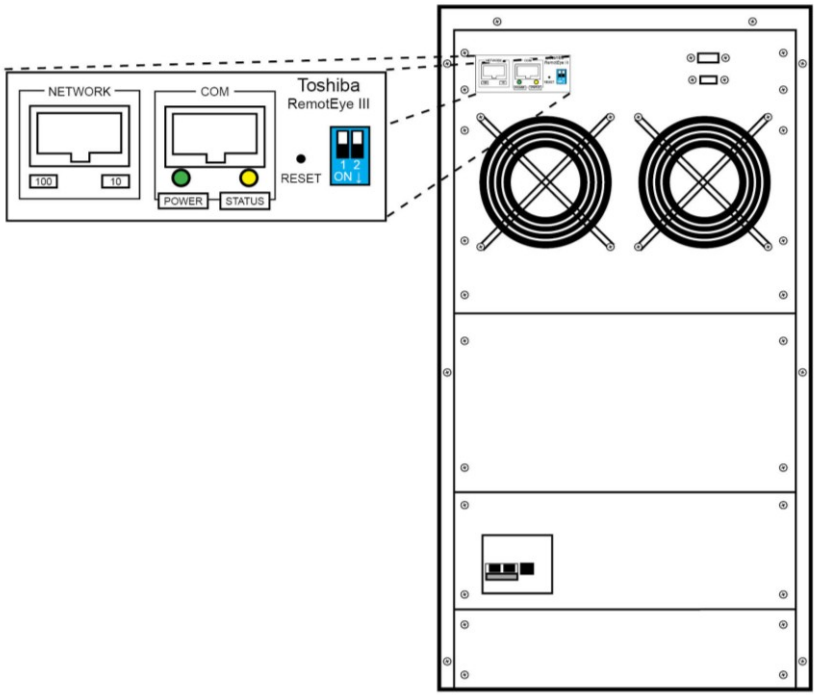


Figure 2: RemotEye III in 1600XP UPS

Making the Network Connection

Each Ethernet network is different. Therefore, the following steps should be used as an outline for connecting the RemotEye III to a network:

1. Connect one end of a Category 5 cable to the NETWORK RJ45 receptacle of RemotEye III.
2. Connect the other end of the Category 5 cable to a designated network switch or hub. A network administrator will allocate an available port.
3. Verify a network link has been established. Confirm the left-most green LED is illuminated.

Configuration

RemotEye III must be configured for proper operation on its network. The RemotEye III offers three convenient methods for configuration.

Preliminary Issues

RemotEye III is a network device. Several items should be considered prior to communicating with RemotEye III over the network. The following sections cover important topics when placing a device on an Ethernet network.

MAC Address

The Media Access Control (MAC) address is an identification number which uniquely identifies each Ethernet device on a network. The MAC address (sometimes called the physical address) is made up of 6 hexadecimal bytes.

A label marked with the MAC address is included with each RemotEye III. This label is affixed the top of every RemotEye III printed circuit board.

For each RemotEye III, the MAC address is created using the following format: 00 E0 D8 LL MM NN. The first half of this code, 00 E0 D8, identifies the manufacturer of the Ethernet board. Since every RemotEye III is produced by the same manufacturer, these 3 hexadecimal bytes remain constant. The LL MM NN characters identify the serial number of the device in hexadecimal form. The serial number is unique for each RemotEye III device.

Default IP Address

The RemotEye III is initially configured with a default Internet Protocol (IP) address. By default, the 4 bytes composing the default IP address are derived from the MAC address in the following way:

172.18.xxx.yyy where xxx is the decimal value of the MM MAC address byte and yyy is the decimal value of the NN MAC address byte.

Example: A RemotEye III MAC address of 00 E0 D8 0C 01 3F would have a default IP address of 172.18.1.63.

This places RemotEye III on a 172.18.0.0 IP network.

Default Network Mask

The RemotEye III is initially configured with a default Network Mask. This default value is always: 255.255.0.0. This places RemotEye III on a Class B network.

Default Gateway

The RemotEye III is initially configured with a Gateway address of 0.0.0.0. This value indicates RemotEye III will not attempt to use a gateway when transmitting.

Configuring the RemotEye III via Terminal

The RemotEye III can be configured by directly connecting to the device.

Hardware Setup

Direct configuration is accomplished through the provided cable. Follow these steps to setup the hardware for direct RemotEye III configuration:

Connect the DB9 female end of the PC cable to the terminal or workstation COM port.

Connect the RJ45 end of the PC cable to the COM port of the RemotEye III.

Software Setup

The direct configuration is accomplished by using the RS232 communication protocol. The direct communication can be performed from a workstation running Terminal Emulator Software (TES)

Connecting to the RemotEye III via Terminal

A direct configuration session can easily be established once the hardware and software are properly set up. Follow these steps to begin configuration:

Terminal Emulator Example

To configure the RemotEye III from a Windows platform, use HyperTerminal. (Except Windows Vista. Hyper Terminal is not available with Windows Vista. Hyper Terminal software is available through various sources on the Internet. Contact Toshiba for additional information.)

HyperTerminal is a standard terminal emulator packaged with all Windows operating systems except Vista. Launch the HyperTerminal program by navigating to Start →Programs →Accessories →Communication →HyperTerminal, and follow the prompts.

Enter a name and select an icon for the application at the Connection Dialog box.

Select a direct connection to an appropriate com port listed in the pull-down menu.

Ensure that the Properties dialog box is setup according to preceding .

Baud Rate — 9600

Data Bits — 8

Parity — None

Stop Bits — 1

Flow Control —- None

Press [Enter] and the RemotEye III version and Password field will be displayed (see

Figure 3: Console Login Screen).

Enter the password (default is “ADMIN”) and press [Enter] to display the RemotEye III Main Menu.

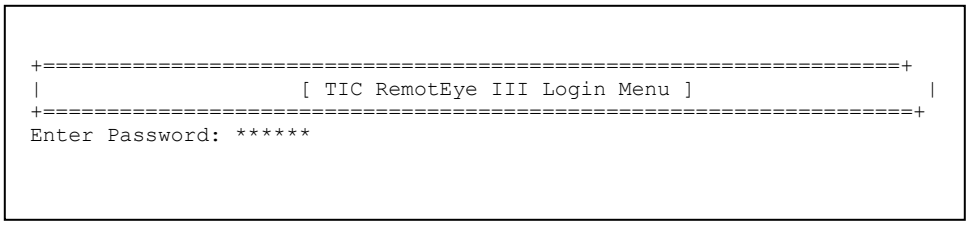


Figure 3: Console Login Screen

The seven options provided in the RemotEye III Main Menu provide access to all system RemotEye III configuration parameters. These options (see the Main Menu Description on **Figure 4: Console Main Menu**) and their submenus are discussed in more detail in the next section.

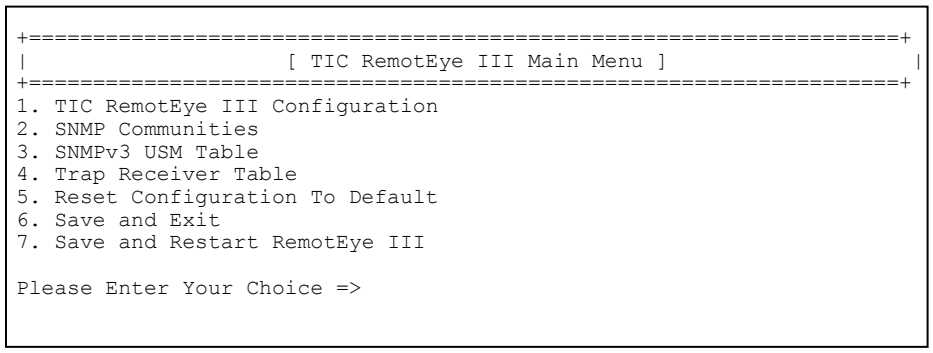

+===+
| [TIC RemotEye III Main Menu] |
+===+
1. TIC RemotEye III Configuration
2. SNMP Communities
3. SNMPv3 USM Table
4. Trap Receiver Table
5. Reset Configuration To Default
6. Save and Exit
7. Save and Restart RemotEye III
Please Enter Your Choice =>

Figure 4: Console Main Menu

RemotEye III Configuration Menu Navigation

The main menu of the RemotEye III provides access to configuration parameters. The table below (table 1) provides an overview of the entire menu structure. When navigating through these menus, all alpha-numeric characters are acceptable and are case-sensitive.

RemotEye III Main Menu		
(1) Toshiba RemotEye III Configuration	(1) System Group	RemotEye III Agent Version
		Ethernet Address
		(1) IP Address
		(2) Gateway Address
		(3) Network Mask
		(4) Date and Time
		(0) Return to Previous Menu
	(2) Control Group	(1) HTTP Login Username
		(2) Community Read-On1y
		(3) Community Read/Write
		(4) BOOTP/DHCP Control
		(5) Telnet Control
		(6) Network Upgrade Control
		(7) HTTP Security Control
		(8) SNMP Version Control
		(0) Return to Previous Menu
	(3) Parameter Group	(1) System Contact
		(2) System Name
		(3) System Location
		(4) Poll Rate
		(0) Return to Previous Menu
	(4) Email Group	(1) Mail Server
		(2) User Account
		(3) User Password
		(4) Domain Name
		(5) DNS IP Address
		(6) Daily Status Report
		(7) Mail Receivers
		(8) Test Email Configuration
		(0) Return to Previous Menu
	(5) EMD Group	(1) Temperature Group
		(2) Humidity Group
		(3) Alarm-1 Group
		(4) Alarm-2 Group
		(5) Devise Status

		(0) Return to Previous Menu
	(0) Return to Previous Menu	
(2) SNMP Communities		(1) Modify Table Entry
		(2) Reset to Default Setting
		(0) Return to Previous Menu
(3) SNMPV3 USM Table		(1) Modify Table Entry
		(2) Reset to Default Setting
		(0) Return to Previous Menu
(4) Trap Receiver Table		(1) Modify Table Entry
		(2) Reset to Default Setting
		(0) Return to Previous Menu
(5) Reset Configuration to Default		Reset Configuration (y/n)?
(6) Save and Exit		
(7) Save and Restart RemotEye III		Restart Agent (y/n)?

Table 1: Menu Map for RemotEye III Console

Main Menu Description

The Main Menu of the RemotEye III consists of the following options (see Figure 5: Console Main Menu Description):

1. Toshiba RemotEye III Configuration
2. SNMP Communities
3. SNMPv3 USM Table
4. Trap Receiver Table
5. Reset Configuration to Default.
6. Save and Exit.
7. Save and Restart Agent.

Press the number of the associated selection and press Enter.

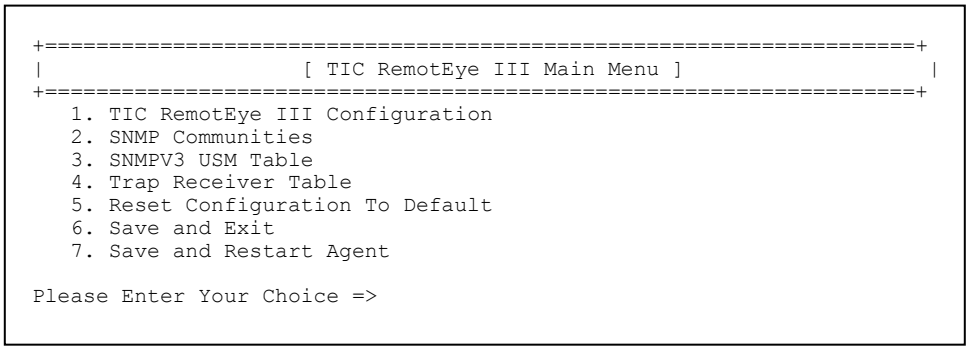

[TIC RemotEye III Main Menu]
1. TIC RemotEye III Configuration
2. SNMP Communities
3. SNMPV3 USM Table
4. Trap Receiver Table
5. Reset Configuration To Default
6. Save and Exit
7. Save and Restart Agent
Please Enter Your Choice =>

Figure 5: Console Main Menu Description

Toshiba RemotEye III Configuration

Main Menu →(1)Toshiba RemotEye III Configuration (see Figure 6: Console Configuration Menu Description).

The Toshiba RemotEye III Configuration option provides access to the following system settings:

1. System Group
2. Control Group
3. Parameter Group
4. Email Group
5. EMD Group

0. Return to Previous Menu

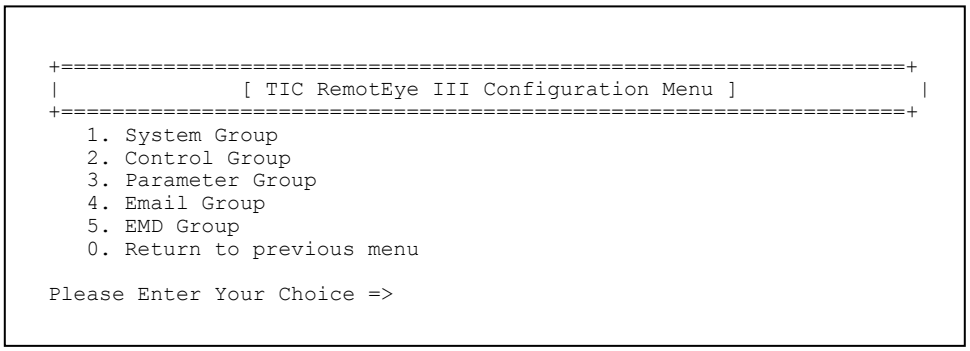


Figure 6: Console Configuration Menu Description

System Group

Main Menu →(1)Toshiba RemotEye III Configuration →(1)System Group (see Figure 7: Console System Group Menu Description).

The System Group provides access to the system settings listed below. The settings may be viewed or changed from this screen. When using the Dynamic Host Configuration Protocol (DHCP), items 1 – 3 will be retrieved automatically.

1. IP Address — RemotEye III IP address.
2. Gateway Address — The gateway IP address (if a router is necessary).
3. Network Mask — The network mask for the RemotEye III network.
4. Date and Time — The RemotEye III date in the MM/DD/YYYY format The RemotEye III time in the HH:MM:SS format. RemotEye III supports the Network Time Protocol (NTP) and NTP Time Zone features. These two features enable the UPS to synchronize its date and time with a NTP server and with the options of daylight saving time control. (see Figure 8: Date & Time Menu Description).

0. Return to Previous Menu.

```
+=====================================================================+
|                      [ System Group Menu ]                          |
+=====================================================================+
      RemotEye III Agent Version : TIC RemotEye III v1.00
      Ethernet address   : 00 E0 D8 08 80 0D
   1. Ip Address         : 172.18.1.63
   2. Gateway Address    : 172.18.1.1
   3. Network Mask       : 255.255.240.0
   4. Date and Time
   0. Return to previous menu

Please Enter Your Choice =>
```

Figure 7: Console System Group Menu Description

```
+=====================================================================+
|                    [ Date and Time Menu ]                           |
+=====================================================================+
   1. System Date (dd/mm/yyyy)     : 03/01/2010
   2. System Time (hh:mm:ss)       : 12:22:21
   3. NTP Server                   : 0.0.0.0
   4. NTP Time Zone                : -06:00
   5. Daylight Saving Time Control : Enabled
   6. NTP Control                  : Enabled
   0. Return to previous menu

Please Enter Your Choice =>
```

Figure 8: Date & Time Menu Description

Control Group

Main Menu →(1)Toshiba RemotEye III Configuration → (2)Control Group (see Figure 9: Console Control Group Menu Description on page 28)

The Control Group menu provides access to the system settings listed below. The settings may be viewed and changed from this screen.

1. HTTP Login User Name — The login user name grants write access from a web browser (the default setting is TOSHIBA).
2. Community Read-Only — This common community name provides read-only access to devices within this community. (The default setting is "public".)
3. Community Read/Write — This common community name provides read and write access to devices within this community. (The default setting is "ADMIN".) This value is equivalent to the terminal/telnet login password.
4. BOOTP/DHCP Control — This parameter is used to enable or disable the BOOTP/ DHCP requests from RemotEye III. (The default setting is Enabled).
5. Telnet Control — This parameter is used to enable or disable remote RemotEye III configuration through telnet applications. (The default setting is Enabled).
6. Network Upgrade Control — This parameter is used to enable or disable the Trivial File Transfer Protocol image upgrade. When disabled, RemotEye III will block any attempts to upgrade. (The default setting is Disabled.)
7. HTTP Security Control — This parameter is used to enable or disable the web password protection feature. When enabled, a password is required to access RemotEye III through the web, and write privileges are automatically assumed. When disabled, any machine can access RemotEye III over the web, but a password is required prior to assuming write privileges. (The default setting is Disabled.)
8. SNMP Version Control —This parameter is used to enable and disable the Simple Network Management Protocol security level. When enable, administrators has the options to set for SNMPv1 or SNMPv3.

0. Return to Previous Menu

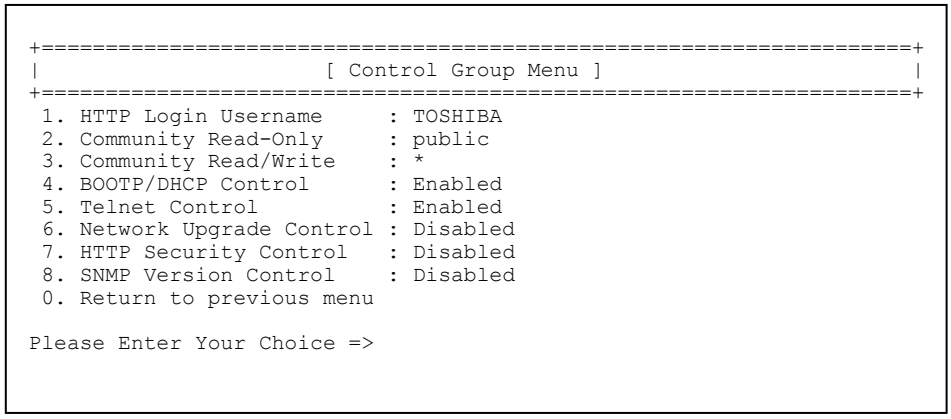

[Control Group Menu]
1. HTTP Login Username : TOSHIBA
2. Community Read-Only : public
3. Community Read/Write : *
4. BOOTP/DHCP Control : Enabled
5. Telnet Control : Enabled
6. Network Upgrade Control : Disabled
7. HTTP Security Control : Disabled
8. SNMP Version Control : Disabled
0. Return to previous menu
Please Enter Your Choice =>

Figure 9: Console Control Group Menu Description

Parameter Group

Main Menu →(1)Toshiba RemotEye III Configuration →(3)Parameter Group (see Figure 10: Console Parameter Group Menu Description)

The Parameter Group provides access to the system settings listed below. The settings may be viewed or changed from this screen.

1. System Contact — The RemotEye III system administrator. (The default setting is TIC Local Technical Support.)
2. System Name — The alias of the RemotEye III. This string serves as the RemotEye III Client Identifier (CID) in DHCP systems.
3. System Location — The RemotEye III physical location.
4. Poll Rate — The polling rate in seconds. This determines how frequently RemotEye III updates its data from the Toshiba UPS. (The default setting is 5.)

0. Return to previous menu.

NOTE: System will label each event email with the system Name and Location, in the format: systemName@SystemLocation

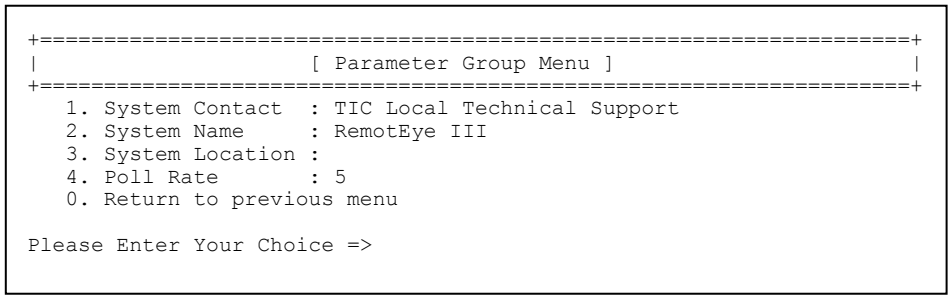

[Parameter Group Menu]
1. System Contact : TIC Local Technical Support
2. System Name : RemotEye III
3. System Location :
4. Poll Rate : 5
0. Return to previous menu
Please Enter Your Choice =>

Figure 10: Console Parameter Group Menu Description

Email Group

Main Menu → (1)Toshiba RemotEye III Configuration → (4)Email Group (see Figure 11: Console Email Group Menu Description on page 30)

The Email Group menu provides access to the system settings listed below. The settings may be viewed and changed from this screen.

1. Mail Server — The Simple Mail Transfer Protocol (SMTP) mail server IP address. If a hostname is used, such as smtp.tic.toshiba.com, the Domain Name Server (DNS) IP address is required on setting #4.
2. User Account — The user account login name for the SMTP mail server.
3. User Password — The user account password for the SMTP mail server.

Note: Not all servers require login name and password, please check with SMTP administrator.

4. Domain Name — The domain Name of the mail server.
5. DNS IP Address — Domain Name Server IP address is required if a hostname is used for Mail Server. Otherwise, this field can be 0.0.0.0.
6. Daily Status Report — This parameter is used to set the time to send RemotEye III daily status report
7. Mail Receivers — RemotEye III sends email notification to four recipients. The recipients include users who use Short Message System (SMS) in Email address format, such as phonenumber@telcompany.com. Check with your carrier for the correct format to receive text messages.
8. Test Email Configuration — This parameter enables the administrator to send out a test email to verify system operation. If instant email is not received after the test, please check the configuration.

0 Return to Previous Menu

Mail Account — This parameter is used to enter the recipients' email Address

Mail Type

- None – Disable option to send email to recipients.
- Events – Current events will be sent to recipients.
- Daily Status – Daily History log and Events log will be sent to the email recipients at the designated time.
- Events with Status – Current events, History log and Events log will be sent to email recipients when events occurred.

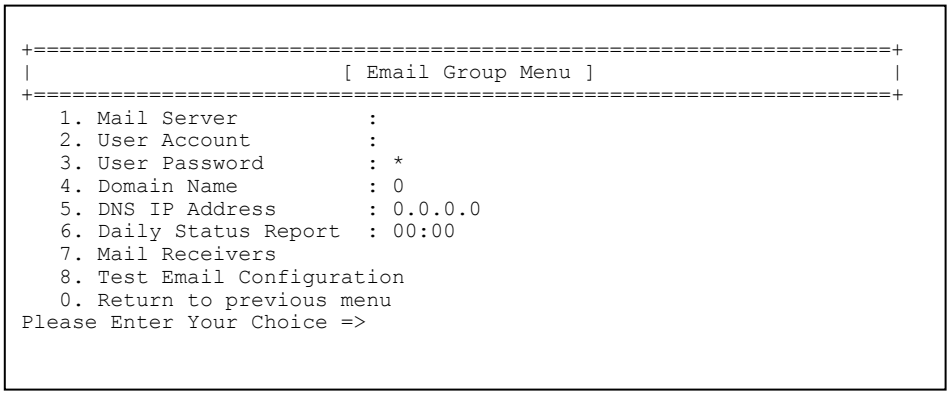

[Email Group Menu]
1. Mail Server :
2. User Account :
3. User Password : *
4. Domain Name : 0
5. DNS IP Address : 0.0.0.0
6. Daily Status Report : 00:00
7. Mail Receivers
8. Test Email Configuration
0. Return to previous menu
Please Enter Your Choice =>

Figure 11: Console Email Group Menu Description

EMD Group

Main Menu →(1)Toshiba RemotEye III Configuration → (5)EMD Group (see on page 31)

The EMD Group menu provides access to the system settings listed below. The settings may be viewed and changed from this screen.

1. Temperature Group — The Temperature Group provides the options to setup the low and high warning and critical points. Users also have the options to setup the hysteresis and calibration offset from this group.
2. Humidity Group — The Humidity Group provides the options to setup the low and high warning and critical points. Users also have the options to setup the hysteresis and calibration offset from this group..
3. Alarm-1 Group — The Alarm-1 Group provides the option to setup this dry contact as normal close, normal open, high active, low active and disabled.
4. Alarm-2 Group — The Alarm-2 Group provides the option to setup this dry contact as normal close, normal open, high active, low active and disabled.
5. Device Status — The Device Status provides the options of disabled and auto. Auto will enable the RemotEye III to auto detect the EMD that connected to it PC port.

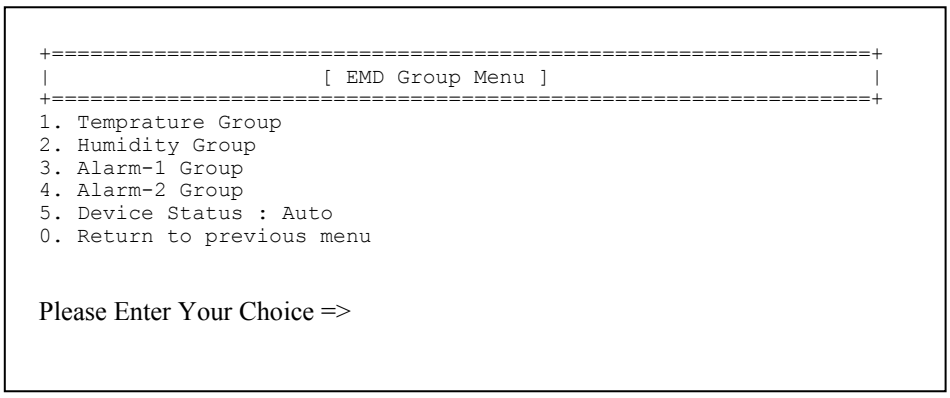

[EMD Group Menu]
1. Temprature Group
2. Humidity Group
3. Alarm-1 Group
4. Alarm-2 Group
5. Device Status : Auto
0. Return to previous menu
Please Enter Your Choice =>

Figure 12: Console EMD Group Menu Description

SNMP Communities

Main Menu →(2)SNMP Communities (see Figure 12: SNMP Communities Description).

The SNMP Communities lists the status and configuration of access rights that are currently granted and the applicable level of access. The entries in this table are largely responsible for restricting SNMP communication with RemotEye III.

The configuration of the SNMP communities shall be as follows:

IP Address: IP address of the NMS

Community String: NMS Get/Set Community String

(Please refer to SNMP Get/Set Criteria on page 89 for a more detailed explanation on Get/Set.)

Access: Select Access Type:

1. Read Only
2. Read/Write
3. NoAccess

```
+=====================================================================+
|   IP Address       Community String      Access                     |
+=====================================================================+
[1] 0.0.0.0          *                     No Access
[2] 0.0.0.0          *                     No Access
[3] 0.0.0.0          *                     No Access
[4] 0.0.0.0          *                     No Access
[5] 0.0.0.0          *                     No Access
[6] 0.0.0.0          *                     No Access
[7] 0.0.0.0          *                     No Access
[8] 0.0.0.0          *                     No Access

   COMMANDS -
   1. Modify - Modify an entry of table
   2. Reset - Reset an entry to default from table
   0. Return to previous menu

Please Enter Your Choice =>
```

Figure 13: SNMP Communities Description

SNMPv3 USM Table

Main Menu →(3)SNMPv3 USM Table (see Figure 13: SNMPv3 USM Menu Description).

The SNMPv3 USM Table lists the status and configuration of access rights that are currently granted and the applicable level of access. The entries in this table are largely responsible restricting SNMPv3 security with RemotEye III.

The configuration of the SNMPv3 USM table shall be as follows:

User Name: The User ID for the authorized individual.

Authentication Passowrd: The password string for the authorized individual.

Privacy Passowrd: The privacy password string for the authorized individual.

Security: The security level provides the following 3 options:

1. noAuthNoPriv – with no authentication and no privacy passwords
2. authNoPriv - with authentication password but no privacy password
3. authPriv – with no authentication password but with privacy password

Authentication format: The authentication format provides the following options:

1. HMAC-MD5
2. HMAC-SHA

Status Type: The status shows the authentication status, Ready or not being used.

```
+=========================================================================+
| User Name             Authentication. Password    Privacy Password |
| Security              Authentication Format       Status Type      |
+=========================================================================+
[1]
  noAuthNoPriv             HMAC-MD5                 Not Use
[2]
  noAuthNoPriv             HMAC-MD5                 Not Use
[3]
  noAuthNoPriv             HMAC-MD5                 Not Use
[4]
  noAuthNoPriv             HMAC-MD5                 Not Use

   COMMANDS -
   1. Modify - Modify an entry of table
   2. Reset - Reset an entry to default from table
   0. Return to previous menu

Please Enter Your Choice =>
```

Figure 14: SNMPv3 USM Menu Description

Trap Receiver Table

Main Menu →(4)Trap Receiver Parameters (see Figure 15: Console Trap Receiver Table Description).

The Trap Receiver Table lists IP addresses of the administrative machines that have been assigned to receive traps.

The configuration of the trap receivers shall be as follows:

IP Address: IP address of the NMS.

Community String: NMS community string.

Select Trap Type:

1. None
2. Toshiba Trap
3. JEMA Trap
4. RFC 1628 Trap

Description: Description of the NMS.

```
+=========================================================================+
|   IP Address       Community String     Trap-Type    Description    |
+=========================================================================+
[1] 0.0.0.0          *
[2] 0.0.0.0          *
[3] 0.0.0.0          *
[4] 0.0.0.0          *
[5] 0.0.0.0          *
[6] 0.0.0.0          *
[7] 0.0.0.0          *
[8] 0.0.0.0          *

   1. Modify - Modify an entry of table
   2. Reset - Reset an entry to default from table
   0. Return to previous menu

Please Enter Your Choice =>
```

Figure 15: Console Trap Receiver Table Description

Reset Configuration to Default

Main Menu →(5) Reset Configuration to Default.

Selecting this option restores all RemotEye III card settings to its original default values.

From the Main Menu, press 4 to access the Reset Configuration to the Original Setting screen.

Save and Exit

Main Menu →(6)Save and Exit.

When executed, the system saves the RemotEye III configuration and exits the program. The new configuration takes effect immediately.

Save and Restart RemotEye III

Main Menu →(7) Save and Restart RemotEye III.

When executed, the system saves the RemotEye III configuration and restarts RemotEye III program.

Configuring the RemotEye III via Telnet

The RemotEye III can be configured by establishing a telnet session with the device.

Hardware Setup

Telnet configuration is accomplished through a network link. Follow these steps to setup the hardware for telnet RemotEye III configuration:

Verify network cable connection to NETWORK port of RemotEye III.

Verify active link to LAN or Network.

For further information on the network connection, refer to Making the Network Connection on page 18.

Software Setup

The telnet configuration is accomplished through a TCP/IP network connection. A telnet connection can be established with RemotEye III by using any telnet application. Follow these steps to setup the software for telnet RemotEye III configuration:

Verify workstation is loaded with Telnet application.

Verify a valid network path exists between the RemotEye III and the workstation. If performing the telnet configuration from a workstation that is located on the same network, then proceed to the next section to the section, Connecting to the RemotEye III via Telnet on page 38, otherwise, continue with the next section Routing to the RemotEye III on page 37.

Routing to the RemotEye III

If the workstation is not on the same network as the RemotEye III, the system may require the addition of a network route. This is typically only necessary when RemotEye III is using its default address.

Consult operating system documentation pertaining to the addition of network routes for instruction.

Example Route Addition

Windows operating systems provide the command Route Add for adding network routes.

Assume the default IP Address of the RemotEye III is 172.18.1.63, and assume the IP Address of the workstation is 210.67.192.147. To add the appropriate network route between these two devices, follow these steps:

Turn on the workstation, and setup the TCP/IP protocol (if necessary).

Enter the following command to add a routing condition:

Route add 172.18.1.63 210.67.192.147

See the Windows manual for further information on how to add a routing condition to a workstation.

Connecting to the RemotEye III via Telnet

A telnet configuration session can be established once the hardware and software are prepared. Follow these steps to begin configuration:

1. Type telnet followed by the IP address of RemotEye III at a Unix console or a DOS prompt.
2. Press [Enter].
3. Key in the password (default is "ADMIN") when prompted.

For more information on using telnet, please refer to telnet application Windows help.

The RemotEye III will only accept 2 telnet clients simultaneously. The telnet connection will time-out after 60 seconds of inactivity.

RemotEye III Telnet Menu Navigation

The configuration menus for telnet configuration are identical to those presented by a direct configuration session. Refer to page 23 for detailed guidance through configuration menus of RemotEye III.

Configuring the RemotEye III via HTTP

The RemotEye III can be configured by opening a web session with the device.

Hardware Setup

Web configuration is accomplished through a network link. Follow these steps to prepare the hardware for HTTP RemotEye III configuration:

1. Verify network cable connection to NETWORK port of RemotEye III.
2. Verify active link to LAN or Network.
3. For further information on the network connection, refer to Making the Network Connection on page 18.

Software Setup

The web configuration is accomplished through a TCP/IP network connection. A web connection can be established with RemotEye III by using any Internet Browser application (for example, Netscape). Follow these steps to setup the software for web-based RemotEye III configuration:

1. Verify workstation is loaded with web browser application.
2. Verify a valid network path exists between RemotEye III and the workstation. If performing the web configuration from a workstation that is located on the same network, then proceed to the next section; otherwise, refer back to the section entitled Routing to the RemotEye III on page 37.

System Setup

To access the RemotEye III via the web, enter the IP address of the RemotEye III in the URL field of the browser and press Enter. If unable to access the RemotEye III due to a firewall, contact the network administrator for information on bypassing the firewall of the LAN.

The HTTP Security Control setting may also affect the user's ability to access the RemotEye III. The HTTP Security Control setting may be set or viewed from: Main Menu →(1)TIC RemotEye III Configuration →(2) Control Group → (7) HTTP Security Control.

If the HTTP Security Control setting is Disabled, the user is granted read-only access. If the HTTP Security Control is Enabled, any attempt to access RemotEye III pages will be met with a request to enter a password. Once the password has been entered in the user will be able to not only view the information, but make changes accordingly. The password is the same as the Community Read/Write string (see Main Menu →(1)Toshiba RemotEye III Configuration →(2) Control Group → (3) Community Read/Write).

Once access to the RemotEye III is achieved, refer to this section for information on how to use the web-based administration interface to monitor and maintain the RemotEye III. This section also provides information on the built-in administrative functions of the RemotEye III.

To prevent unauthorized users from configuring the RemotEye III via HTTP, the IP address of the workstation must be entered in the RemotEye III SNMP Communities with no access permissions (via RS232 or Telnet) or the SNMP/ HTTP Access Control (via Web Browser) of the RemotEye III. Otherwise, the RemotEye III will provide only read access to its parameters.

Connecting to the RemotEye III via HTTP

A web session can be established once the hardware and software have been prepared. Follow these steps to begin configuration:

1. Launch the web browser.
2. Enter the URL for RemotEye III in the browser's address field. For example, http://172.18.1.63. The home page of the RemotEye III will be displayed once a connection is established (see Figure 16: RemotEye III HTTP Page on page 40).

Perform the following procedure to setup the RemotEye III using its provided web configuration pages.

1. Select RemotEye III Management → RemotEye III Configuration to configure RemotEye III.
2. Click the Become Super User button at the bottom of the screen. Enter TOSHIBA as the login name and "ADMIN" as the password (case sensitive). Non-DHCP users continue on to step 3. DHCP users may skip steps 3 to 6.
3. Enter the RemotEye III IP address.
4. Enter the RemotEye III Gateway address in the network.
5. Enter the RemotEye III Network Mask of the network.
6. Click Set Value to save the settings.
7. Select RemotEye III Management →Date and Time to set date and time.
8. Enter the appropriate date and time in the specified format.
9. Click Set Value to save the settings.
10. Select RemotEye III Management → RemotEye III Control to enable or disable the network protocols.

Figure 16: RemotEye III HTTP Page

RemotEye III Web Menu Navigation

The RemotEye III home page is comprised of Six primary menus:

- UPS Monitoring
- UPS Management
- Email Notification
- EMD Management
- RemotEye III Management
- History, Data, and Logs.

The six primary menus provide access to UPS and RemotEye III monitoring and control functions, and each is discussed in detail in the following sections.

UPS Monitoring

This menu allows the user to view the collected data from the UPS measurements. The UPS measured parameters are listed below and are allowed only to be read.

Comprehensive View

This page lists the UPS parameters. This page will refresh automatically at a user-defined rate. To change or view the refresh rate setting, select RemotEye III Management - HTTP Page Refresh Rates.

UPS Mode
This field shows the present UPS system mode. These readings include: Start-Up, On-Line, Bypass, Backup, Battery Test, and Shutdown.

Input Voltage (V)
This field shows the present UPS input voltage in VAC.

Input Frequency (Hz)
This field shows the present UPS input frequency in Hz.

Output Voltage (V)
This field shows the present UPS output voltage in VAC.

Output Load Percentage (%)
This field shows the present UPS load in % of kVA.

Output Frequency (Hz)
This field shows the present UPS output frequency in Hz.

UPS System Temperature (^{o}C)
This field shows the present UPS temperature in ^{o}C.

UPS Battery Temperature (^{o}C)
This field shows the present UPS battery temperature in ^{o}C.

Date on RemotEye III (mm/dd/yyyy)
This field shows the RemotEye III date setting. This value is displayed in the mm/dd/yyyy format.

Time on RemotEye III (hh:mm:ss)
This field shows the RemotEye III time setting. This value is displayed in the hh:mm:ss 24-hour format (i.e. 8:30 p.m. is 20:30:00).

UPS Data - General

This page allows the user to retrieve the UPS identification and revision information.

UPS Manufacturer
This field shows the name of the UPS manufacturer.

UPS Typeform
This field shows the typeform of the UPS to which RemotEye III is presently attached.

UPS Description
This field shows the model description of the UPS to which RemotEye III is presently attached.

UPS Serial Number
This field shows the UPS manufactured serial number for the UPS which RemotEye III is presently attached.

UPS Main Firmware Version
This field shows the present firmware version for the UPS. This is for informational purpose.

UPS Main Boot Sector Version
This field shows the present boot sector version for the UPS. This is for informational purpose.

UPS Main Boot Loader Version
This field shows the present boot loader version for the UPS. This is for informational purpose.

UPS Job Number
This field shows the present job number for the UPS. This is for informational purpose.

UPS Test Date
This field shows the date the UPS was last tested. This is for informational purpose.

UPS Hardware Build Date
This field shows the date the UPS was built. This is for informational purpose.

UPS EEPROM Version
This field shows the present EEPROM version for the UPS. This is for informational purpose.

UPS System Name
This field shows the administrator-configured name of the UPS. For configuration, please refer to UPS Configuration menu.

UPS Attached Devices
This field shows the administrator configured description of the load devices that attached to the UPS (e.g. computers, communication devices, etc). For configuration, please refer to UPS Configuration menu.

UPS Installation Date
This field shows the date the UPS was installed. For configuration, refer to the UPS Configuration menu.

UPS Data Display

This page shows the UPS Display Information. This page will refresh automatically at a user-defined rate. To change or view the current refresh setting, select RemotEye III Management – HTTP Page Refresh Rates.

Display Firmware Version
This field shows the present firmware version for the display. This is for informational purpose.

Display Boot Sector Version
This field shows the present boot sector version for the display. This is for informational purpose.

Display Boot Loader Version
This field shows the present boot loader version for the display. This is for informational purpose.

Display Sleep Timer (Mins)
This field shows the amount of time the display will remain active before it will enter sleep mode.

Display Buzzer Mode
This field shows the current buzzer mode. Users can specify at what conditions the buzzer can sound.

Display Buzzer Status
This field shows the current status of the buzzer. This will determine if the alarm is silenced or sound if an alarm should occur.

UPS Data – Other

This page shows the UPS states. This page will refresh automatically at a user-defined rate. To change or view the current refresh setting, select RemotEye III Management – HTTP Page Refresh Rates.

EPO Contact State
This field shows the current contact state of the Emergency Power Off (EPO).

UPS Run Stop Switch Status
This field shows the current state of the run (On-Line)/stop (bypass) switch on the UPS.

UPS Service Port Status
This field shows the current status of the UPS Service Port on the UPS. This will inform users if an error has occurred.

Internal Communication Status
This field shows the internal communication status for the UPS. This will inform users if an error has occurred.

Input Parameters

This page shows the UPS line voltage input readings. This page will refresh automatically at a user-defined rate. To change or view the current refresh rate setting, select RemotEye III Management - HTTP Page Refresh Rates..

Input Power Supply Configuration
This field shows the present power supply information at the input for the UPS.

Input Number of Lines
This field shows the number of input lines for the UPS.

Input Voltage (V)
This field shows the UPS input voltage in VAC.

Input Voltage Percent (%)
This field shows the UPS input voltage in percent.

Input Rated Voltage (V)
This field shows the input rated voltage of the UPS. This can be changed by the administrator.

Input Current (Amps)
This field shows the present UPS input current in Amps.

Input Current Percent (%)
This field shows the UPS input current in percent.

Input Rated Current (Amps)
This field shows the input rated current of the UPS in Amps.

Input Frequency (Hz)
This field shows the UPS input frequency in Hz.

Input Rated Frequency (Hz)
This field shows the input rated frequency of the UPS.

Input Active Power (Watts)
This field shows the present UPS input active power in Watts.

Input Rated Active Power (Watts)
This field shows the present UPS input rated active power in Watts.

Input Apparent Power (VA)
This field shows the present UPS input apparent power in Volt-Amps.

Input Power Factor
This field shows the present UPS input power factor.

Output Parameters

This page shows the UPS output voltage source and readings. This page will refresh automatically at a user-defined rate. To change or view the current refresh setting, select RemotEye III Management - HTTP Page Refresh Rates..

Output Power Supply Configuration
This field shows the present power supply information at the output for the UPS.

Output Number of Lines
This field shows the present phase of the output for the UPS.

Output Voltage (V)
This field shows the UPS output voltage in VAC.

Output Rated Voltage (V)
This field shows the output rated voltage of the UPS. This can be changed by the administrator.

Output Under Voltage Level (%)
This field shows the minimum allowable voltage before it falls into under voltage range.

Output Over Voltage Level (%)
This field shows the maximum limit of the output voltage before the UPS enters the over voltage state.

Output Current (Amps)
This field shows the present UPS output current in Amps.

Output Rated Current (Amps)
This field shows the present UPS output rated current in Amps.

Output Load Percentage (%)
This field shows the UPS load as a percentage of the maximum load setting.

Output Frequency (Hz)
This field shows the present UPS output frequency in Hz.

Output Rated Frequency (Hz)
This field shows the present UPS output rated frequency in Hertz.

Output Frequency Synch Range (Hz)
This field shows the allowable range for synchronizing output frequency.

Output Active Power (Watts)
This field shows the present UPS output active power in Watts

Output Rated Active Power (Watts)
This field shows the present UPS output rated active power in Watts.

Output Apparent Power (VA)
This field shows the present UPS apparent power in VA

Output Rated Apparent Power (VA)
This field shows the present UPS output rated apparent power in VA

Output Rated Power Factor
This field shows the present UPS output power factor.

Bypass Parameters

This page shows the UPS bypass values. This page will refresh automatically at a user-defined rate. To change or view the current refresh setting, select RemotEye III Management – HTTP Page Refresh Rates.

Bypass Power Supply Configuration
This field shows the present power supply information during bypass for the UPS

Bypass Number of Lines
This field shows the number of bypass lines for the UPS.

Bypass Voltage (V)
This field shows the UPS voltage during bypass in VAC.

Bypass Current (Amps)
This field shows the present UPS bypass current in Amps.

Bypass Frequency (Hz)
This field shows the present UPS bypass frequency in Hertz.

Bypass Apparent Power (VA)
This field shows the present UPS bypass apparent power in VA

Bypass Under Voltage Detection (%)
This field shows the minimum allowable voltage before it falls into bypass under voltage range.

Bypass Under Voltage Recovery (%)
This field shows the allowable voltage that it can recover from under voltage.

Bypass Over Voltage Detection (V)
This field shows the maximum allowable voltage before it falls into over voltage range.

Bypass Over Voltage Recovery (V)
This field shows the allowable voltage that it can recover from over voltage.

DC Bus Parameters

This page shows the UPS DC Bus values. This page will refresh automatically at a user-defined rate. To change or view the current refresh setting, select RemotEye III Management – HTTP Page Refresh Rates.

DC Bus Total Voltage (V)
This field shows the DC Bus voltage in VDC.

DC Bus Positive Voltage (V)
This field shows the positive DC Bus voltage in VDC.

DC Bus Negative Voltage (V)
This field shows the negative DC Bus voltage in VDC.

DC Bus Rated Voltage (V)
This field shows the rated DC Bus voltage in VDC.

Battery Parameters

This page provides the battery status and battery run-time information. This page will refresh automatically at a user-defined rate. To change or view the refresh rate setting, select RemotEye III Management – HTTP Page Refresh Rates.

Battery Status
This field shows the status of the UPS batteries. These readings include: Unknown, Normal, Low,

Depleted, Discharging, and Failure.

Elapsed Time on Battery Power (Secs)
This field shows the elapsed time (in seconds) since the UPS switched to battery power.

Battery Voltage (Vdc)
This field shows the battery voltage in VDC.

Calculated Battery Shutdown Voltage (Vdc)
This field shows the battery's shutdown voltage in VDC.

Battery Discharge Current (Adc)
This field shows the battery's discharge current in Amps.

Battery Charge Status
This field shows the present Battery Charge status.

Number of Discharge
This field shows the present number of battery discharges.

Battery Life Remaining (Month)
This field shows the remaining battery life. The maximum battery lifetime is 5 years. This shows the remaining battery lifetime in months.

Battery Rated Ampere Hour (Ahr)
This field shows the present battery capacity in Ampere Hour.

Battery In Series
This field shows the number of batteries connected in series.

Battery In Parallel
This field shows the number of batteries connected in parallel.

Battery Installation Date
This field shows the last installation date of the UPS system's batteries. This value is displayed in the

dd/mm/yyyy format. When the UPS batteries are replaced, this value should be adjusted accordingly by the service center.

Battery Voltage Shutdown Level (%)
This field shows the present battery voltage shutdown level in percent.

Battery Low Level (%)
This field shows the battery low level in percent.

Battery Charge Over Voltage Delay (Sec)
This field shows the battery charge over voltage delay in seconds.

Calculate Low Battery Level (Vdc)
This field shows the calculated low battery level in VDC.

External Battery Install Status

This field shows installation status of the external battery. It can be installed or uninstalled.

External Battery In Series
This field shows the number of external batteries connected in series.

External Battery In Parallel
This field shows the number of external batteries connected in parallel.

External Battery Rated Ampere Hour (Ahr)
This field shows the present external battery capacity in Ampere Hour.

External Battery C Rate
This field shows the present external battery C Rate.

External Battery Install Date
This field shows the installation date of the external battery.

Alarm Table

This page provides past and active UPS alarm activity and descriptions. This page will refresh automatically at a user-defined rate. To change or view the refresh rate setting, select RemotEye III Management - HTTP Page Refresh Rates.

Number of Present Alarms
This field shows the number of active UPS alarms.

Lastest Alarm
This field shows the last recorded UPS alarm in the format Date, Time, and Information about the alarm..

Alarm ID
This field shows the sequential number associated with the alarm; it indicates the activation sequence of the alarms. This number will be reset after a RemotEye III reboot.

Alarm Time
This field shows the RemotEye III alarm time stamp. This value is displayed in the hh:mm mm/dd/yyyy format. Note: The time depends on the RemotEye III clock setting.

Alarm Description
Info: This field shows the UPS alarm description.

Warning: UPS has encountered a noncritical abnormal condition that requires attention. Please refer to the manual for possible causes and solutions.

Fault: UPS has encountered a critical abnormal condition and requires attention. Please refer to the manual for possible causes and solutions. If more information is needed or additional assistance is required, contact Toshiba authorized service center for Service.

ID	Alarm Occur Message	SNMP Trap Add	Level	SNMP Trap Remove
1	upsAlarmFault	upsTrapFault	Fault	upsTrapFaultClear
2	upsAlarmOpenFuse	upsTrapOpenFuse	Fault	upsTrapOpenFuseClear
3	upsAlarmCurrentLimitFault	upsTrapCurrentLimitFault	Fault	upsTrapCurrentLimitFaultClear
4	upsAlarmDCBusOverCurrent	upsTrapDCBusOverCurrent	Fault	upsTrapDCBusOverCurrentClear
5	upsAlarmDCOverVoltage	upsTrapDCOverVoltage	Fault	upsTrapDCOverVoltageClear
6	upsAlarmDCBusImbalance	upsTrapDCBusImbalance	Fault	upsTrapDCBusImbalanceClear
7	upsAlarmOutputUnderVoltage	upsTrapOutputUnderVoltage	Fault	upsTrapOutputUnderVoltageClear
8	upsAlarmOutputOverVoltage	upsTrapOutputOverVoltage	Fault	upsTrapOutputOverVoltageClear
9	upsAlarmHeatSinkOverheat	upsTrapHeatSinkOverheat	Fault	upsTrapHeatSinkOverheatClear
10	upsAlarmBypassOverload	upsTrapBypassOverload	Fault	upsTrapBypassOverloadClear
11	upsAlarmChargerOverVoltage Fault	upsTrapChargerOverVoltage Fault	Fault	upsTrapChargerOverVoltage FaultClear
12	upsAlarmOutputOverCurrent	upsTrapOutputOverCurrent	Fault	upsTrapOutputOverCurrentClear

ID	Alarm Occur Message	SNMP Trap Add	Level	SNMP Trap Remove
13	upsAlarmDCUnderVoltAtBoost Up	upsTrapDCUnderVoltAtBoostU p	Fault	upsTrapDCUnderVoltAtBoostUp Clear
14	upsAlarmDCUnderVoltAt Charge	upsTrapDCUnderVoltAtCharge	Fault	upsTrapDCUnderVoltAtCharge Clear
15	upsAlarmBypassOverheat	upsTrapBypassOverheat	Fault	upsTrapBypassOverheatClear
16	upsAlarmResettableInverter Overload	upsTrapResettableInverterOverl oad	Fault	upsTrapResettableInverter OverloadClear
ID	Alarm Occur Message	SNMP Trap Add	Level	SNMP Trap Remove
17	upsAlarmUnresettableInverter Overload	upsTrapUnresettableInverter Overload	Fault	upsTrapUnresettableInverter OverloadClear
18	upsAlarmInputOverVoltage	upsTrapInputOverVoltage	Warning	upsTrapInputOverVoltageClear
19	upsAlarmInputUnderVoltage	upsTrapInputUnderVoltage	Warning	upsTrapInputUnderVoltageClear
20	upsAlarmInputFrequencyError	upsTrapInputFrequencyError	Warning	upsTrapInputFrequencyErrorClear
21	upsAlarmBypassOverVoltage	upsTrapBypassOverVoltage	Warning	upsTrapBypassOverVoltageClear
22	upsAlarmBypassUnderVoltage	upsTrapBypassUnderVoltage	Warning	upsTrapBypassUnderVoltageClear
23	upsAlarmBypassFrequency Error	upsTrapBypassFrequencyError	Warning	upsTrapBypassFrequencyError Clear
24	upsAlarmDCUnderVoltAtTest	upsTrapDCUnderVoltAtTest	Warning	upsTrapDCUnderVoltAtTestClear
25	upsAlarmBatteryLow	upsTrapBatteryLow	Warning	upsTrapBatteryLowClear
26	upsAlarmBatteryAtShutdown level	upsTrapBatteryAtShutdownlevel	Warning	upsTrapBatteryAtShutdownlevel Clear
27	upsAlarmReplaceBattery	upsTrapReplaceBattery	Warning	upsTrapReplaceBatteryClear
28	upsAlarmChargerOverVoltage Warning	upsTrapChargerOverVoltage Warning	Warning	upsTrapChargerOverVoltage WarningClear
29	upsAlarmBatteryTestFailed	upsTrapBatteryTestFailed	Warning	upsTrapBatteryTestFailedClear
30	upsAlarmBatteryDepleted	upsTrapBatteryDepleted	Warning	upsTrapBatteryDepletedClear
31	upsAlarmBatteryOverheat	upsTrapBatteryOverheat	Warning	upsTrapBatteryOverheatClear
32	upsAlarmSystemOverheat	upsTrapSystemOverheat	Warning	upsTrapSystemOverheatClear
33	upsAlarmOutputOverload Warning	upsTrapOutputOverloadWarning	Warning	upsTrapOutputOverloadWarning Clear
34	upsAlarmCurrentLimitWarning	upsTrapCurrentLimitWarning	Warning	upsTrapCurrentLimitWarningClear
35	upsAlarmAsyncOperation	upsTrapAsyncOperation	Warning	upsTrapAsyncOperationClear
ID	Alarm Occur Message	SNMP Trap Add	Level	SNMP Trap Remove
36	upsAlarmServiceUPS	upsTrapServiceUPS	Warning	upsTrapServiceUPSClear

37	upsAlarmBatteryNear Expiration	upsTrapBatteryNearExpiration	Warning	upsTrapBatteryNearExpiration Clear
38	upsAlarmBatteryExpired	upsTrapBatteryExpired	Warning	upsTrapBatteryExpiredClear
39	upsAlarmDisplayCableError	upsTrapDisplayCableError	Warning	upsTrapDisplayCableErrorClear
40	upsAlarmRemotEyeCommError	upsTrapRemotEyeCommError	Warning	upsTrapRemotEyeCommError Clear
41	upsAlarmRemotEyeUplink CommError	upsTrapRemotEyeUplink CommError	Warning	upsTrapRemotEyeUplink CommErrorClear
42	upsAlarmServicePortComm Error	upsTrapServicePortCommError	Warning	upsTrapServicePortCommError Clear
43	upsAlarmDispCommError	upsTrapDispCommError	Warning	upsTrapDispCommErrorClear
44	upsAlarmSystemTestFailed	upsTrapSystemTestFailed	Warning	upsTrapSystemTestFailedClear
45	upsAlarmBypassOn	upsTrapBypassOn	Info	upsTrapBypassOnClear
46	upsAlarmPowerFailure	upsTrapPowerFailure	Info	upsTrapPowerFailureClear
47	upsAlarmShutdownPending	upsTrapShutdownPending	Info	upsTrapShutdownPendingClear
48	upsAlarmOutputOffAs Requested	upsTrapOutputOffAsRequested	Info	upsTrapOutputOffAsRequested Clear
49	upsAlarmOutputOff	upsTrapOutputOff	Info	upsTrapOutputOffClear
50	upsAlarmBatteryTestInProgress	upsTrapBatteryTestInProgress	Info	upsTrapBatteryTestInProgress Clear
51	upsAlarmBatteryOn	upsTrapBatteryOn	Info	upsTrapBatteryOnClear
52	upsAlarmEMDSensor1Alarm Triggered	upsTrapEMDSensor1Alarm Triggered	Info	upsTrapEMDSensor1Alarm TriggeredClear
53	upsAlarmEMDSensor2Alarm Triggered	upsTrapEMDSensor2Alarm Triggered	Info	upsTrapEMDSensor2Alarm TriggeredClear
54	upsAlarmEMDHumidityAtLow CiriticalPoint	upsTrapEMDHumidityAtLow CriticalPoint	Info	upsTrapEMDHumidityAtLow CriticalPointClear
55	upsAlarmEMDHumidityAtHigh CiriticalPoint	upsTrapEMDHumidityAtHigh CriticalPoint	Info	upsTrapEMDHumidityAtHigh CriticalPointClear
56	upsAlarmEMDHumidityAtLow WarningPoint	upsTrapEMDHumidityAtLow WarningPoint	Info	upsTrapEMDHumidityAtLow WarningPointClear
57	upsAlarmEMDHumidityAtHigh WarningPoint	upsTrapEMDHumidityAtHigh WarningPoint	Info	upsTrapEMDHumidityAtHigh WarningPointClear

ID	Alarm Occur Message	SNMP Trap Add	Level	SNMP Trap Remove
58	upsAlarmEMDTemperatureAtLow CiriticalPoint	upsTrapEMDTemperatureAtLo w CriticalPoint	Info	upsTrapEMDTemperatureAtLow CriticalPointClear
59	upsAlarmEMDTemperatureAtHigh CiriticalPoint	upsTrapEMDTemperatureAtHig h CriticalPoint	Info	upsTrapEMDTemperatureAtHigh CriticalPointClear
60	upsAlarmEMDTemperatureAtLow WarningPoint	upsTrapEMDTemperatureAtLo w WarningPoint	Info	upsTrapEMDTemperatureAtLow WarningPointClear
61	upsAlarmEMDTemperatureAtHigh WarningPoint	upsTrapEMDTemperatureAtHig h WarningPoint	Info	upsTrapEMDTemperatureAtHigh WarningPointClear

Connected Client Table

This page lists the protected registered clients of the RemotEye III that are running during the execution of the RemotEye III Shutdown application. This page will refresh automatically at a user-defined rate. To change or view the current refresh rate setting, select RemotEye III Management - HTTP Page Refresh Rates.

Connected Client Number
This field shows the total number of RemotEye III clients running the RemotEye III Shutdown Application that are presently registered with the RemotEye III. Up to 250 clients may be registered at one time.

Index
This field shows the serialized index numbers of the RemotEye III registered clients that are running during the execution of the RemotEye III Shutdown application.

IP Address
This field shows the IP addresses of the registered clients of the RemotEye III.

Client Name
This field shows the computer names of the registered clients of the RemotEye III.

Connected Time
This field shows the connection duration of the registered clients of the RemotEye III.

Shutdown Delay
This field shows the shutdown delay of the RemotEye III registered client machines.

UPS Management

This menu contains the control parameters of the UPS system connected to the RemotEye III.

UPS Configuration - General

This page shows the identification, installed date, input and output electrical parameters of the UPS.

UPS System Name
This field shows the specific name to identify a particular UPS.

UPS Attached Devices
This field allows the administrator to assign a description of load devices that attach to the UPS or to view the current setting.

UPS Installation Date
This field allows the administrator to change the date the UPS was installed.

Input Rated Voltage (V)
This field shows the input rated voltage of the UPS. This can be changed by the administrator.

Output Rated Voltage (V)
This field shows the output rated voltage of the UPS.

UPS Service Comm Port Setting

This field shows the external communication port settings of the UPS.

Input Frequency Setup when Error (Hz)
This field shows the frequency to set if the UPS cannot determine the input frequency after 3 seconds. This can be changed by the administrator. Users can only input 50.0 Hz or 60.0 Hz

UPS Configuration - Display

This page shows the display parameters of he UPS.

Display Sleep Timer (Mins)
This field shows the amount of time the display will remain active before it will go to “sleep”.

Display Buzzer Mode
This field shows the Buzzer status as Enabled or Disabled.

UPS Control

This page shows the adjustable settings of the UPS.

Output Voltage Adjust
This field shows the manual voltage adjustment for the output of the UPS.

Range – -5 to +5 (One increment ~1Vrms)

UPS Enable RMTI-3 To Control Mode
This field shows the present mode of the control that the RemotEye III has on the UPS. This allows the RemotEye to enable or disable control the UPS Bypass and On-Line mode. It is set by the administrator.UPS Mode Change Delay (secs)

0 – Disable
1 – Enable.

UPS Mode Change Delay (secs)
This field shows the amount of time, in seconds, before the UPS will change state.

Range – 0 to 800 seconds

UPS Mode Change Request
This field shows the mode the UPS can switch to. Users can notify the UPS to switch to Shutdown, Bypass, On-Line, using this feature. Choices are:

1- Shutdown Request
2- Bypass Request: *UPS Enable RMTI-3 To Control Mode* must be Enabled in order to function.
3- On-Line Request : *UPS Enable RMTI-3 To Control Mode* must be Enabled in order to function.

UPS Start Up Delay Enable
This field shows the present state of the UPS Start Up delay. It can be enabled or disabled. It is set by the administrator.

0 – Disable
1 – Enable.

UPS Start Up Delay (secs)
This field shows the time delay, in seconds, before UPS Start Up immediately following a shutdown. It is set by the administrator.

Range – 0 to 800 seconds. *UPS Start Up Delay Enable* must be Enabled in order to function.

UPS Start Up Delay Mode
This field shows the mode at which to enter following the startup delay. It can either enter Bypass state or On-Line state. It is set by the administrator.

0- Bypass: *UPS Start Up Delay Enable* must be Enabled in order to function.
1- On-Line

UPS Restart After Battery Shutdown Enable
This field shows the present mode set for UPS input power detection immediately after a shutdown while on batteries. It is set by the administrator.

0 – Disable
1 – Enable.

UPS Restart After Battery Shutdown Delay (secs)
This field shows the time delay, in seconds, before UPS Start Up immediately following a shutdown while on batteries. It is set by the administrator.

Range – 0 to 800 seconds. *UPS Restart After Battery Shutdown Enable* must be Enabled in order to function.

UPS Restart Mode
This field shows the mode at which to enter when UPS is restarted. It can either enter Bypass state or On-Line state. It is set by the administrator.

0- Bypass: *UPS Restart After Battery Shutdown Enable* must be Enabled in order to function.
1- On-Line

UPS Auto Transfer Enable
This field shows the present mode for the auto transfer of the UPS. It can be enabled or disabled. It is set by the administrator.

0 – Disable
1 – Enable

UPS Auto Retransfer Delay (secs)
This field shows the time period to wait after fault occurrence before attempting transfer back On-Line. It is set by the administrator.

Range – 0 to 600 seconds. *UPS Auto Transfer Enable* must be Enabled in order to function.

Remote Contact ShutDown State
This field shows the present state of the remote contacts shutdown control. It can be open or closed.

0 – Open
1 – Close

Invert Remote Contact Shutdown Logic
This field shows the logic state of the remote contact shutdown. It can be non-inverted or inverted. It is set by the administrator.

0 – Not Inverted
1 – Inverted

Remote Contact Shutdown Mode Selection
This field shows the mode of the remote contact shutdown. It is set by the administrator.

0 – Bypass
1 – Shutdown while contact closed

Dry Contact LAN Shutdown Enable
This field shows the time delay between actual event occurrence and dry contact closure. It is set by the administrator.

0 – Disable
1 – Enable

Dry Contact LAN Shutdown Delay (secs)
This field shows the time delay between actual event occurrence and dry contact closure. It is set by the administrator.

Range – 0 to 800 seconds. *Dry Contact LAN Shutdown Enable* must be Enabled in order to function.

Dry Contact On Battery Delay Timer (secs)
This field shows the time delay between actual event occurrence and dry contact closure. It is set by the administrator.

Range – 0 to 800 seconds.

Dry Contact Low Battery Delay Timer (secs)
This field shows the time delay between actual event occurrence and dry contact closure. It is set by the administrator.

Range – 0 to 800 seconds.

UPS Battery Test

This page shows the types of tests that can be done on the UPS. The Top table lists:

- Last Test Start Time
- Last Test Elapsed time
- Last Test Result
- Battery Test Command allows selection of:
    - None - No action.
    - Quick Test (10 sec) - Quick test for 10 seconds.
    - Cancel Test - Cancel the battery test.
    - Clear Test Result - Clear the last battery test result recorded by RemotEye III.

The parameter table shows the following:

UPS Startup Batt Test Enable
This field allows the RemotEye to force a battery test when UPS starts following a shutdown. It is enabled by the administrator.

UPS Battery Test Enable
This field allows the RemotEye to enable or disable a battery test. It is set by the administrator.

UPS Battery Test Condition Status
This field specifies the availability of the battery test feature.

.

UPS Shutdown Events

This page allows the administrator to modify the output shutdown parameters. Refer to the RemotEye III Manual for details on the output shutdown sequence.

UPS Output Shutdown Delay (secs)
This field allows the administrator to configure or view the delay (in seconds) of the UPS switching from the Run (Inverter) mode to the Output Shutdown mode after receiving the Output Shutdown command.

The UPS output shutdown delay time count down will be synchronized with the output shutdown delay time setting in the RemotEye III Shutdown Service program for all connected clients. To avoid improper output shutdown of the clients, the UPS output shutdown delay time setting in the RemotEye III should always be greater than the RemotEye III Shutdown Service program's shutdown delay setting. Refer to RemotEye III manual for instruction on how to setup RemotEye III Shutdown Service.

UPS Event
This field shows the event attributed to a shutdown action.

Different Events

- **Input Power Failure –** This field shows the action taken upon detection of an input power failure. Default: Warning.
- **Battery Low –** This field shows the action taken upon detection of a battery low condition. Default: Warning
- **UPS Overload –** This field shows the action taken upon detection of a UPS Overload condition: Default: Warning.
- **UPS System Overheat –** This field shows the action taken upon detection of a UPS over temperature condition. Default: Warning
- **EMD Temperature Over Threshold –** This field shows action taken upon detection of a EMD Temperature Over Threshold condition. **Default**: **Disabled**.
- **EMD Alarm-1** - This field shows action taken upon detection of a EMD Alarm-1 condition. **Default: Disabled.**
- **EMD Alarm-2 –** This field shows action taken upon detection of a EMD Alarm-2 condition. **Default: Disabled.**
- **Recurring On/Off Schedule –** This field shows the programmed Recurring On/Off Schedule setting. **Default: Disabled.**
- **Non-Recurring On/Off Schedule –** This field shows the programmed Non-Recurring On/Off Schedule setting. **Default: Disabled.**

Action
This field allows the administrator to set a course of action to be taken in the event of a fault.

Available actions are:

Disable - Action is disabled; no action will be taken.

Client Warning - A warning message will be broadcast to the connected clients.

Client Shutdown - A warning message will be broadcast and the shutdown command will be sent to the connected clients.

UPS Output Shutdown - A warning message will be broadcast, the output shutdown command will be sent to the connected clients, and the UPS will be set to output shutdown

Action Delay (mins)
This field allows the administrator to set the delay (in minutes) of the output shutdown message broadcast or to view the current setting.

Broadcast Notification Interval (secs)
This field allows the administrator to set the broadcast interval (in seconds) of the warning message or to view the current setting.

[Become Administrator] – This button allows someone with an administrator login and password to log in at this time.

Recurring On/Off Schedule (option)

This page allows the administrator to create a recurring UPS shutdown or restart schedule. Ensure that the Recurring On/Off Schedule option is enabled in the UPS Shutdown menu in order to activate any scheduled events.

Event Index
This field shows the index numbers for the table entries.

Output Shutdown & Restart Day
This field allows the administrator to set the day of the week to output shutdown & restart the UPS, or to view the current setting. The schedules are configured in the same-day format.

Output Shutdown Time (hh/mm)
This field allows the administrator to configure the UPS output shutdown time or to view the current settings. This value is displayed in the hh:mm 24-hour format (i.e., 8:30 p.m. is 20:30).

Restart Time (hh/mm)
This field allows the administrator to configure the restart time of the UPS or to view the current settings. This value is displayed in the hh:mm 24-hour format (i.e., 8:30 p.m. is 20:30).

Non-Recurring On/Off Schedule

This page allows the administrator to set the output shutdown/restart schedule for the UPS.

Event Index
This field shows the reference number for the output shutdown/restart event.

Output Shutdown Date (mm/dd/yyyy)
This field allows the administrator to configure the specific date of the UPS output shutdown or to view the current setting.

Output Shutdown Time (hh:mm)
This field allows the administrator to set the UPS shutdown time. This value is displayed in the hh:mm:ss 24-hour format (i.e. 8:30 p.m. is 20:30:00).

Restart Date (mm/dd/yyyy)
This field allows the administrator to configure the UPS restart date or to view the current setting.

Restart Time (hh:mm)
This field allows the administrator to configure the restart time of the UPS or to view the current setting. This value is displayed in the hh:mm 24-hour format (i.e. 8:30 p.m. is 20:30).

Email Notification

This page allows the administrator to set the RemotEye III email notification configuration parameters.

Mail Server
This field allows the administrator to set the IP Address or Hostname of a Simple Mail Transfer Protocol (SMTP) mail server that will be used to send email messages from the RemotEye III. If entering a Hostname, the Domain Name Server (DNS) address is required in the DNS field.

User Account
This field allows the administrator to set User Account login name of the SMTP mail server.

User Password
This field allows the administrator to set User Account password of the SMTP mail server.

Note: Not all SMTP Server requires login name and password, please check with the SMTP administrator.

Domain Name
This field allows the administrator to set the domain name of the LAN. Example, tic.toshiba.com.

DNS Address
This field allows the administrator to set the IP address of the network DNS server if a Hostname is entered for the Mail Server. Otherwise, this field can be 0.0.0.0.

Mail Daily Status Report At (hh:mm)
This field allows the administrator to set the time to send a Daily Status report to select email address (Mail Accounts), The time is set in 24-hour format.

Choose the attached log data file for Daily Status Report
This field allows the administrator to select which logs to send daily to the user's mail account which set in E-mail account table.

Records Options are General, Test, Backup, Fault, Operation Mode, Warning, System Setting Change, and RemotEye III Events Logs.

Choose the attached log data file for Event Status Report
This field allows the administrator to select which logs to send to the user's mail account, which set in E-mail account table, when it encounters an event condition.

Records Options are General, Test, Backup, Fault, Operation Mode, Warning, System Setting Change, and RemotEye III Events Logs.

The second table lists the email accounts and the level of reporting they will receive.

Mail Account
This field allows the administrator to set the email address of the recipients who will receive the events or/add the status reports.

Description
This field allows the administrator to set the description of the recipients.

Mail Type
This field allows the administrator to select the mail type:

None – Disable option to send email to recipients.

Events – Current events will be sent to recipients.

NOTE: System will label each event email with the system Name and Location, in the format: systemName@SystemLocation

Daily Status – Logs selected by user will be sent daily to the email recipients at the designated time.

Events with Status – Events along with logs selected by user will be sent to email recipients when events occur.

Info Level

Info: Refers to changes in the state of the UPS. Please see UPS manual for additional information

Warning: UPS has encountered a non-critical abnormal condition that requires attention. Please refer to the manual for possible causes and solutions.

Fault: UPS has encountered a critical abnormal condition and requires attention. Please refer to the manual for possible causes and solutions. If more information is needed or additional assistance is required, contact Toshiba authorized service center for Service

EMD Management (Environmental Monitoring Device)

The Environmental Monitoring Device (EMD) is a monitoring device that provides real time comprehensive remote monitoring of environment temperature, environment humidity and other environmental conditions via a web browser and Network Management System (NMS). The EMD also provides two users defined dry contacts for additional environmental monitoring. These dry contacts can be used with devices that provide normally open or normally-closed results, such as door sensors, smoke detectors, motion detectors, and liquid detectors.

EMD Parameter

This page gives a snapshot of all EMD parameters; the parameters will be updated automatically every 5 seconds. The text color of the parameter indicates its status based on the administrator-configurable threshold.

The list below indicates the parameter status.

GREEN : 'normal' status.

YELLOW : 'warning' status,

RED : 'critical' status.

GREY : 'unknown' value.

The EMD provides the measurements for room temperature, room humidity, and two alarms.

The warning/critical thresholds can be setup via the "EMD Configuration" page.

The table Comprehensive View shows the following parameters:

EMD Name
EMD Temperature (°C)
EMD Humidity (%)
EMD Alarm-1
EMD Alarm-2

EMD Configuration

This page allows administrator to configure all necessary parameters of an EMD.

Sensor
The parameters Temperature, Humidity, Alarm-1, Alarm-2, and Device Status.

Set Point (Low)
The low threshold(s) at which the sensor (temperature or humidity) will trigger an alarm(s). The EMD can configured to activate at two set points on the low limit, Warning, and Critical. If the checkbox is not filled, the threshold is disabled and the alarm will not be triggered. The valid range for the Temperature threshold setting is 5°C to 65°C, and for Humidity threshold setting is 5% to 95%.

Set Point (High)
The high threshold(s) at which the sensor (temperature or humidity) will trigger an alarm(s). The EMD can configured to activate two high set points, Warning, and Critical. If the checkbox is not filled, the threshold is disabled and the alarm will not be triggered. The valid range for the Temperature threshold setting is 5°C to 65°C, and for Humidity threshold setting is 5% to 95%.

Hysteresis

A sensors value could float around its threshold triggering multiple nuisance alarms. Setting the hysteresis will help to prevent the alarm bouncing between active and inactive. For example, if the High Warning threshold set point is 40°C and hysteresis is 3, then the alarm will activate when the value reaches 40°C but it will not become inactive again until the sensor value reaches 37°C.

For the contact alarm sensors, the hysteresis can be used to adjust the sensitivity of an alarm. The alarm will be active or inactive only after the alarm stays in the same state for the duration of the hysteresis value (in seconds). For example, if the hysteresis is 5 for an alarm, the alarm will NOT activate until the same state has persisted for 5 seconds. This ruling also applies in reverse so that the alarm has to stay in an inactive state for 5 seconds before the sensor status is recorded as normal.

Calibration Offset

If the measurement value of a sensor does not, for whatever reason, comply with the actual environment, the 'Calibration Offset' setting can be configured to adjust the final value of the sensor. For example, if a sensor reports 43% humidity for a 45% humidity environment, the administrator can configure the humidity offset as 2% so the sensor can then adjust its final value to 45%.

Alarm-1 (Sec), Alarm-2 (Sec)

If an alarm sensor (water leak, security, etc) is connected to the EMD, the administrator can configure the alarm as 'Disabled', 'Normal Open', 'Normal Close', 'High Active', or 'Low Active'. A 'Disabled' setting will mean the alarm is inactive.

'Normal Open' and 'Normal Close' are used for a two-wire detector that will emulate an open/close state. When the wires are closed to 'loopback' (the signal for the sensor), the sensor will detect the state as closed. The sensor will NOT activate the alarm for 'Normal Close' in this case, although the alarm will be activated if configured as 'Normal Open'.

'High Active' and 'Low Active' can be configured when a 'contact closure' type detector is attached. The administrator should connect the wire to the right side of the alarm (marked as arrow-in), and 8 to 12 VDC should be able to be detected by the EMD as 'high' state.

Device Status

The EMD can be configured as 'Disabled' or 'Auto'. The setup should be configured as 'Disabled' if an EMD is not attached to the port. The EMD type will be auto detected by the EMD if configured as 'Auto' and if the EMD is plugged into the port.

RemotEye III Management

This menu allows the administrator to view the RemotEye III control parameters. Users have read-only privileges, whereas the administrators have read/write access.

Date and Time

This page shows the options on setting RemotEye III date and time.

Date and Time
These two fields show the current Date and Time of the RemotEye III. This can be changed to synchronize with a computer, an enquiry from a timeserver (NTP) or can be set manually. The date value is displayed in the MM/DD/YYYY format (i.e., Jan 18, 2010 is 01/18/2010). The time value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).

Synchronize with computer time – Computer Date, Computer Time
This field allows the administrator to synchronize the RemotEye III date and time to the computer clock the end user is using.

Synchronize with NTP server – IP Address
NTP server IP and correct time zone must be selected to activate this option. After configuration, the RemotEye III will synchronize its time with the server periodically. If Daylight Saving Time is enabled, the time will be one hour earlier than NTP server time.

Set Manually – Date (mm/dd/yyyy), Time (hh:mm:ss)
This field allows the administrator to configure the RemotEye III date and time manually.

Time Zone
This field allows the administrator to set the local time zone and compensate for Daylight Savings Time when seting the RemotEye III date and time manually.

RemotEye III Configuration

This page shows the configurable settings of the RemotEye III.

RemotEye III Software Revision
This field shows the revision of RemotEye III.

RemotEye III Hardware (MAC) Address
This field shows the RemotEye III MAC address. MAC address format is 00 E0 D8 XX XX XX.

RemotEye III IP Address
This field allows the administrator to set the IP address of the RemotEye III or to view the current setting (i.e., 192.9.60.229).

RemotEye III Gateway Address
This field allows the administrator to set the IP address of the gateway or to view the current setting (i.e., 192.9.60.10).

RemotEye III Subnet Mask
This field allows the administrator to set the subnet mask of the RemotEye III or to view the current setting (i.e., 255.255.255.0).

RemotEye III Install Date
This field shows the date the RemotEye was installed.

RemotEye III Install Status
This field notifies to the UPS that an external device is connected to the UPS.

RemotEye III Network Link
Values option: Link Down means disconnected or Link Up means connected

RemotEye III Polling Rate (secs)
This field allows the administrator to set the time interval of the RemotEye III updates that are received from the UPS.

RemotEye III Baud Rate (bps)
This field shows the data transmission rate between the UPS and the RemotEye III.

RemotEye III General Records Logs Frequency(secs)
This field allows the administrator to set the polling time (in seconds) of the Input Voltage, Output Voltage, Output Load, Battery Voltage, Input Frequency, and the UPS Output Source. The readings will be stored in the history log.

RemotEye III System Name
This field allows the administrator to set the value in System name that is defined in MIB-II or to view the current setting. This string also serves as the RemotEye III Client Identifier (CID) in DHCP systems.

RemotEye III System Contact
This field allows the administrator to set the value in System manager (System Contact) that is defined in MIB-II or to view the current setting.

NOTE: System will label each event email with the system Name and Location, in the format: systemName@SystemLocation

RemotEye III System Location
This field allows the administrator to set the value in System installation place (System Location) that is defined in MIB-II or to view the current setting.

Default Language
This field allows the administrator to set the default language: English or Japanese. The RemotEye III homepage will be displayed using the language set in the internet browser. If the language is not supported by the RemotEye III, the RemotEye III will respond with the default language.

RemotEye III Control

This page allows the administrator to Enable/Disable the available RemotEye III communication protocols. In addition, it allows the administrator to restart or reset the RemotEye III.

RemotEye III DHCP Control
This field allows the administrator to Enable/Disable the Boot Protocol (BootP)/ Dynamic Host Configuration Protocol (DHCP) support or to view the current settings. These protocols are Internet standards and are used to obtain a dynamic IP address from a BootP/DHCP server.

RemotEye III Telnet Control
This field allows the administrator to Enable/Disable the terminal-to-server application (Telnet) control process (i.e., telnet 192.168.7.18).

RemotEye III TFTP Network Upgrade Control
This field allows the administrator to Enable/Disable the Trivial File Transfer Protocol (TFTP) upgrade control or to view the current setting. The Windows upgrade utility, Tugrade, may be used to upgrade the RemotEye III when enabled.

SNMP Version
This field allows the administrator to enable and disable the Simple Network Management Protocol security level. When enabled, administrators have the option to set for SNMPv1 or SNMPv3.

RemotEye III Reset to Default

RemotEye III Restart

SNMP TRAP Receivers

This page lists the parameters for SNMP trap receivers (for SNMP Network Management).

Index
This field shows the index numbers for the table entries.

IP Address
This field allows the administrator to set the IP Address of the NMS station to which the traps should be sent or to view the current setting.

Community String
This field allows the administrator to set the community string of the trap's PDU to be sent or to view the current setting. The maximum length of the string is 19 characters.

Trap Type
This field allows the administrator to set the types of traps to be received or to view the current settings.

Setting options are:

None : Traps are not being received.

Toshiba Trap : Traps are received based on the Toshiba MIB.

JEMA Trap: Traps are received based on the JEMA MIB.

RFC 1628 Trap: Traps are received based on the RFC 1628 MIB.

Info Receiving Severity level
Info: Refers to changes in the state of the UPS. Please see UPS manual for additional information

Warning: UPS has encountered a noncritical abnormal condition that requires attention. Please refer to the manual for possible causes and solutions.

Fault: UPS has encountered a critical abnormal condition that requires attention. Please refer to the manual for possible causes and solutions. If more information is needed or additional assistance is required, contact Toshiba authorized service center for Service.

Description
This field shows the customer description string.

SNMP Communities /HTTP Access Control

This page displays a list of the Network Management Stations (NMS) that have RemotEye III read and write access.

Index
This field shows the index numbers for the table entries.

NMS IP Address
This field allows the administrator to set the management station's IP address or to view the current settings. 0.0.0.0 means entry not configured. (i.e., An entry of 192.168.7.255 indicates clients with IP address within the range of 192.168.7.0 to 192.168.7.255 are valid network management stations set by the user).

Community String
This field allows the administrator to set the low level password of the associated IP address or to view the current setting.

Access Mode
This field allows the administrator to set the access type for the client machines or to view the current setting.

The available options are:

No Access,

Read Only, and

Read/Write

Note: An entry of 255.255.255.255 grants the user access rights to all IP addresses.

HTTP Page Refresh Rates

This page allows the administrator to set the HTTP page refresh interval rate (in seconds) of the following pages or to view the current setting.

Comprehensive Page (secs)

Input Parameter (secs)

Output Parameter (secs)

Bypass Parameter (secs)

DC Bus Parameter (secs)

Battery Parameter (secs)

Alarm Table (secs)

Connected Client Table (secs)

History Data & Logs

This menu allows the user to view UPS & RemotEye III log messages, such as the UPS History Summaries. The log messages are displayed in chronological order and are used to help detect and diagnose problems with the RemotEye III.

UPS History Summary

This page shows various UPS historical information. This information is based on the data accumulating since the start of the UPS

UPS History System Operation Time (Secs)
This field specifies how long the UPS has been operating (includes On-Line, Bypass, Backup) in seconds.

UPS History Inverter Operation Time (Secs)
This field specifies how long the UPS has been running in Inverter (On-Line) mode in seconds.

UPS History Backup Operation Time (Secs)
This field specifies how long the UPS has been running in battery backup mode in seconds.

UPS History Lifetime Remaining (Month)
This field specifies the remaining lifetime of the UPS in month.

UPS History Highest System Temp (°C)
This field shows the highest system temperature recorded of the UPS in Celsius.

UPS History Highest Battery Temp
This field shows the highest battery temperature recorded of the UPS in Celsius.

UPS History Total Number Input Under Voltage
This field shows the total number of times the UPS has entered under voltage state.

UPS History Total Number Overload
This field shows the total number of times the UPS has overloaded.

UPS History Total Number Test
This field shows the total number of tests that has been conducted on the UPS.

UPS History Total Number Backup
The field shows the total number of times the UPS has switched to battery backup mode.

UPS History Total Number Faults
This field shows the total number of faults the UPS has encountered.

UPS History Total Number Operation Mode Change
This field shows the total number of operational mode change the UPS has encountered.

UPS History Total Number Warnings
This field shows the total number of warnings the UPS has encountered.

UPS History Total Number System Settings Changed
This field shows the total number of UPS system setting changes the UPS has encountered.

UPS History Total Number Resets
This field shows the total number of resets occurred on the UPS.

General Records

This page lists the fundamental UPS parameters. Consolidation intervals may be changed by the administrator by modifying the variable General Records Log Frequency from the RemotEye III Configuration page. The existing values are overwritten when the maximum number of entries has been reached. The log data may be cleared from the Clear & Save Log Data menu.

General Records Log Index Page

This index lists the system status records as a series of blocks each containing up to 32 records. Each block is named "From (date) (time) To (Date) (Time)." The RemotEye will record up to a maximum of 1870 records, then each additional new record will replace the oldest stored General Record.

Click on any index listing to see the UPS History Log Data Table for that period.

The General Records Log Data Table has the following headings:

Log Date (mm/dd/yyyy) - This field shows the date of the recording
Log Time (hh:mm:ss) - This field shows the time that the values were recorded. This value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).
Input Voltage (V)
Input Frequency (Hz)
Output voltage (V)
Battery Voltage (Vdc)
Output Status
Output Frequency (Hz)
Output Current (Amps)

Test Records

This table lists the detail history of test that has occurred on the UPS. The Log can store a maximum of 680 records. If more events are recorded, the new record replaces the oldest record.

Log Date – This field shows the date of the recording.
Log Time – This field shows the time that the values were recorded. This value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).
Record Number
System Input Type
System Output Type
Input Voltage
Output Voltage
Output Load
DC Input Voltage
Battery Voltage
Test Type
RSV
PASS
Trigger Source

Backup Records

This table lists the detail history of backup that has occurred on the UPS. The Log can store a maximum of 680 records. If more events are recorded, the new record replaces the oldest record.

Log Date – This field shows the date of the recording.
Log Time – This field shows the time that the values were recorded. This value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).
Record Number
System Input Type
System Output Type
Input Voltage
Output Voltage
Output Load
DC Input Voltage
Battery Voltage start
Battery Voltage end
Trigger Source
Backup Duration

Fault Records

This table lists the detailed history of faults that have occurred on the UPS. The Log can store a maximum of 680 records. If more events are recorded, the new record replaces the oldest record.

Log Date – This field shows the date of the recording.
Log Time – This field shows the time that the values were recorded. This value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).
Record Number
System Input Type
System Output Type
Input Voltage
Output Voltage
Output Load
DC Input Voltage
Battery Voltage
Slot Location
Fault

Following is a table of the possible UPS fault codes and their meanings.

Fault Code	Description
FSOPEN	Fuse opened
CL	Current limit fault occurred
DCOC	DC bus over current fault occurred
DCOV	DC bus over voltage occurred
DCIB	DC bus imbalance occurred
VOUV	Output voltage undervoltage occurred
VOOV	Output voltage overvoltage occurred
DVCOH	Device overheat occurred

BYPOL	Bypass overload occurred
CHRGOV	Charger overvoltage occurred
OOC	Output overcurrent occurred
DCUVBS	DC bus under voltage occurred at boostup UPS state
DCUVC	DC bus under voltage occurred at charging of UPS state
BYPOH	Bypass overheat occurred
INVOLRSTAOK	Inverter overload occurred and it is resettable
INVOLRSTNOK	Inverter overload occurred and it is NOT resettable

Operation Mode Records

This table lists the detail history of operation mode changes that has occurred on the UPS. The Log can store a maximum of 680 records. If more events are recorded, the new record replaces the oldest record.

Log Date – This field shows the date of the recording.
Log Time – This field shows the time that the values were recorded. This value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).
Record Number
System Input Type
System Output Type
Input Voltage
Output Voltage
Output Load
DC Input Voltage
Battery Voltage
From
To
Branch
Cause

Warning Records

This table lists the detail history of warnings that has occurred on the UPS. The Log can store a maximum of 680 records. If more events are recorded, the new record replaces the oldest record.

Log Date – This field shows the date of the recording.
Log Time – This field shows the time that the values were recorded. This value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).
Record Number
System Input Type
System Output Type
Input Voltage
Output Voltage
Output Load
DC Input Voltage
Battery Voltage
Slot Location
Warning

Following is a table of the possible UPS warning codes and their meanings.

Warning Code	Description
CL	Current limit occurred
ASYN	Input and output are not synchronized
CALL	UPS needs servicing
BATLFNEAR	Battery life near to end
BATLFEND	Battery life end
DCER	Display cable error occurred
REYEERR	Remote eye communication error (RS232)
REYEUPERR	Remote eye communication error (NET)
RS232ERR	Service port communication error
DCANERR	Display CAN communication error
SYSTSTFAIL	System test fail
VIOV	Input over voltage occurred
VIUV	Input under voltage occurred
FIERR	Input frequency error occurred
VBYPOV	Bypass overvoltage occurred
VBYPUV	Bypass undervoltage occurred
FBYPERR	Bypass frequency error occurred
DCUVBST	DC bus uvdervoltage at battery test
VBATLOW	Battery voltage low
VBATSD	Battery voltage has reached shutdown level
BATRPL	Battery replace event occurred
CHRGOV	Charger overvoltege occurred
BTSTFAIL	Battery test failed
BATDEPL	Battery depleted
BATOH	Battery overheat occurred
SYSOH	System overheat occurred
OL110	Overload occurred

System Setting Change Record

This table lists the detail history of system changes that has occurred on the UPS. The Log can store a maximum of 680 records. If more events are recorded, the new record replaces the oldest record.

Log Date – This field shows the date of the recording.
Log Time – This field shows the time that the values were recorded. This value is displayed in the hh:mm:ss 24-hour format (i.e., 8:30 p.m. is 20:30:00).
Record Number
System Input Type
System Output Type
Input Voltage
Output Voltage
Output Load
DC Input Voltage
Battery Voltage
Block
Item
Written
Trigger Source

RemotEye III Events Log

This table lists the RemotEye III events since the table was last cleared. The existing values are overwritten when the maximum number of entries has been reached. The log data may be cleared from the Clear & Save Log Data menu.

Event Date
Event Time
Event Description

Clear and Save Log Data

This allows the options of saving the log data for:

General Records	Test Records	Backup Records
Fault records	Operation Mode Records	Warning Records
System Setting Change Records	RemotEye III Events Log	

The data is saved in an Excel© spreadsheet compatible format.

Clear & Save Log Data

This allows the user to save the RemotEye III log data to a file. The saved file is given a .csv extension, which allows it to be opened using Microsoft Excel. Specific log data may be cleared by the user or the entire log data record may be cleared after saving the .csv file.

Clear Log Data
This field allows the administrator to the clear log data by checking the applicable box and clicking the Clear button.

Clear Log Data after saving the log file
The log data may be cleared after saving the file as a .CSV file by clicking YES at the Clear Log Data after saving the log radio button.

Save Log Data
The log data may be saved as a .CSV file by clicking **General Records, RemotEyeIII Events Log, UPS Events Log, Test Records, Backup Records, Fault Records, Operation Mode Records, Warning Records or System Setting Change Record.**

Note: If the option "Clear Log Data after saving the log file" is selected, once the "Save Log Data" is clicked, the clear log function will be performed even if the user cancels the "Save Log Data" action.

Managing the UPS Via Java

The RemotEye III provides real-time graphical user interfaces written in Java Applet to provide a means to monitor a Toshiba UPS over a LAN or a WAN.

Monitor — Displays the UPS key parameters graphically.

History — Displays the UPS history log graphically.

Monitor

Clicking the Monitor button at the top-left side of the RemotEye III home page will open the UPS Monitor screen in a separate window. The Monitor applet provides a visual representation of the UPS system. It contains a status bar that can display the current UPS status, an alarm window that can display the current UPS alarms, and a display of the following UPS key parameters:

System Name	UPS Model	Serial Number
Date and Time	Input Voltage, Input Frequency	UPS Temperatures
Output Voltage, Output Frequency	UPS Load	Battery Voltage
UPS Output	Estimated Battery Backup Time	Battery Backup Operation
Operation Status	Alarm Status	Communication Status

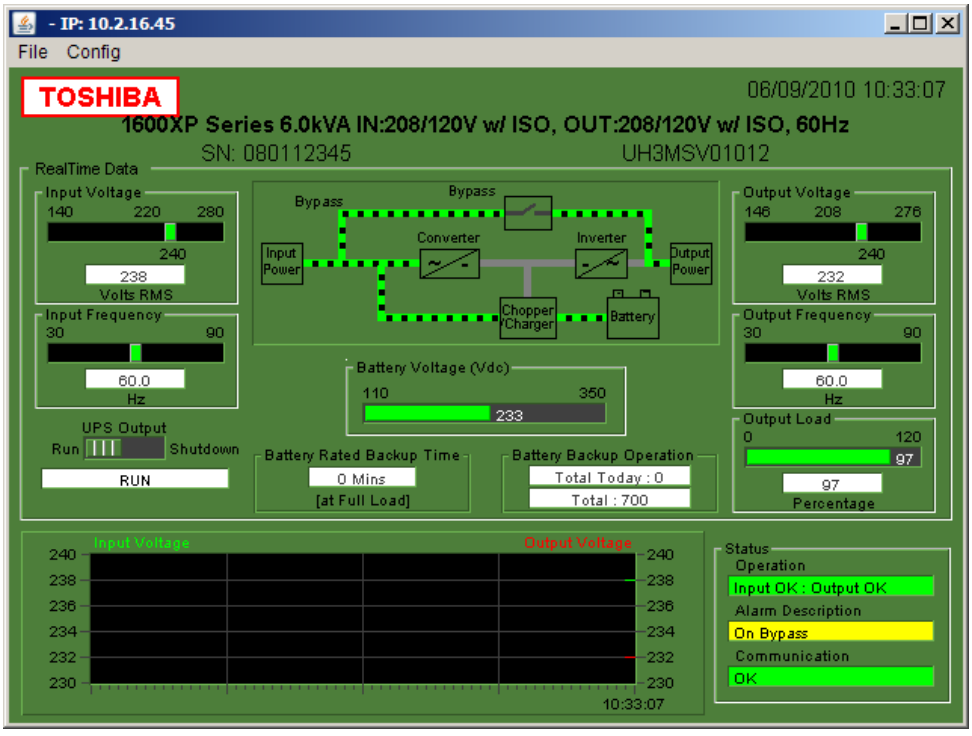


Figure 17: HTTP Monitor Screen

History

Clicking the History button at the top-left side of the RemotEye III home page, Figure 18: HTTP History Data Screen on page 82 will open in a separate window. This screen displays the UPS history log as a line graph. By default, all of the UPS parameters will be displayed on the same graph. The user may select any combination of parameters to be displayed on the graph by clicking the check box beside a parameter on the monitor screen and clicking the Refresh button.

Display Point — Displays the log interval on the graph.

Refresh — Click the Refresh button after changing any settings on the History page for the changes to take effect.

Reload — Updates the History page and resets the right display margin.

Exit — Closes the History window.

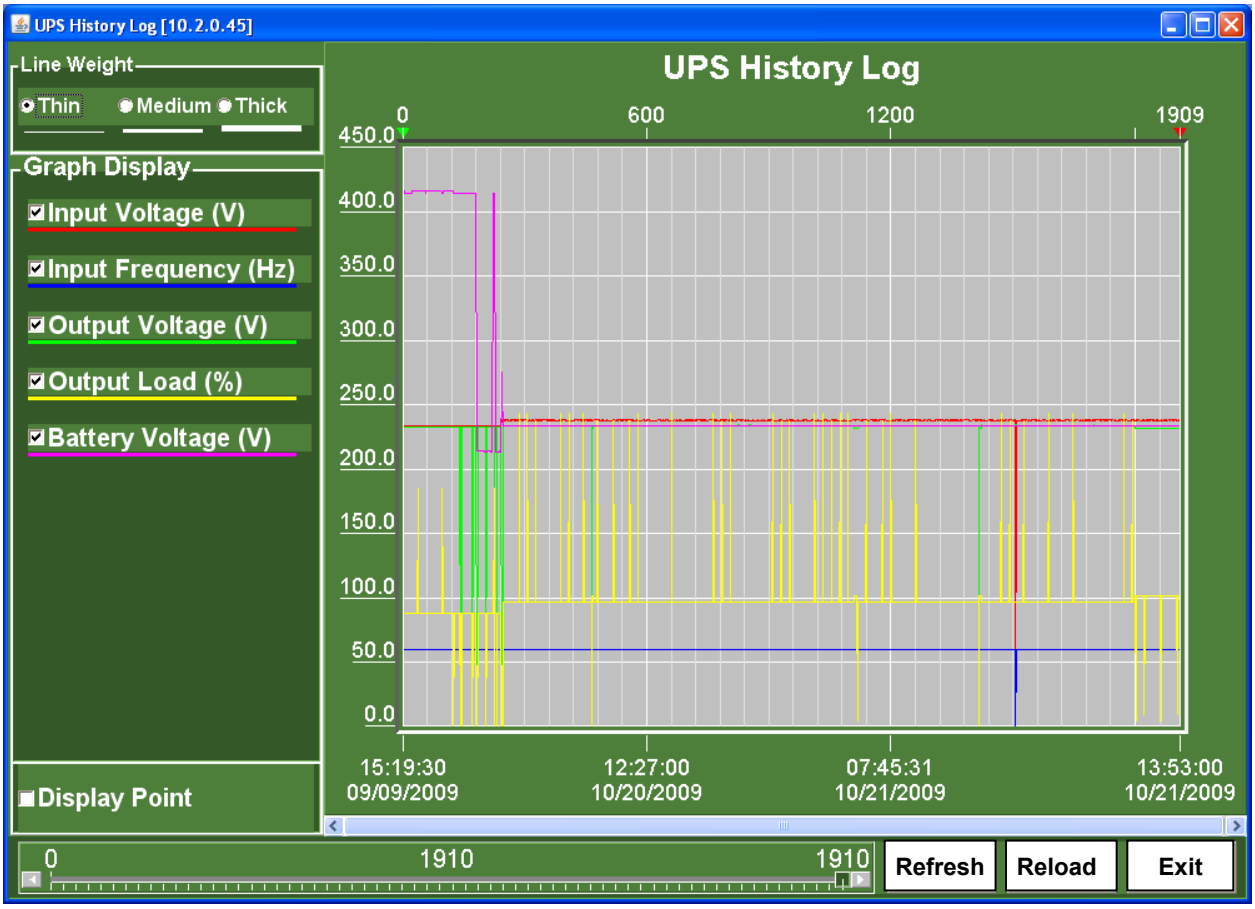


Figure 18: HTTP History Data Screen

Configuring the Remoteye III via SNMP

The RemotEye III supports SNMP. Any workstation with SNMP management software can manage a Toshiba UPS through RemotEye III.

Note: This section will focus entirely on RemotEye III operation in conjunction with the RFC1628-compatible MIB, ToshibaRMTI3.mib.

System Requirements

There are two components of an SNMP system: an Agent and a Manager. The Agent collects information about a network node. The Manager collects information from the Agent.

The RemotEye III provides an Agent for a Toshiba UPS. The Manager is a software application that is provided separately. A workstation running Manager software is considered a Network Management Station (NMS).

There are many Manager applications available. Some commonly used applications are listed below:

Cabletron Spectrum,

DEC Polycenter,

HP OpenView,

IBM NetView,

Novell Managewise, and

SunNet Manager.

The RemotEye III and the Manager software must be configured to communicate with one another.

Preliminary Issues

There are several pieces of information to collect before setting up the RemotEye III and an NMS. As a bare minimum, know the following prior to system setup:

The IP Address of the RemotEye III.

The Gateway Address of the RemotEye III.

The IP Address of the Network Management Station.

RemotEye III (Agent) Settings

Before using the RemotEye III in an SNMP environment, the RemotEye III must be programmed to coordinate with a particular NMS.

Examining Network Pathway

Several RemotEye III parameters determine the networks available for RemotEye III data transmission. These parameters are the IP Address, the Gateway Address, and the MIB System Group.

The IP Address of RemotEye III must place it on the same network as the NMS. If the two elements are not located on the same network, a gateway between the RemotEye III and the NMS must exist.

The Gateway Address indicated in RemotEye III must identify a network device providing access to the network of the NMS. For instruction on defining which gateway RemotEye III uses, consult the System Group section on page 27.

The MIB System Group of RemotEye III must match that of the NMS (see the section titled System Group on page 27 for further information). This parameter will allow an NMS within the group to access RemotEye III data.

Granting Write Access

The RemotEye III controls permissions for workstations. Any workstation attempting to alter UPS parameters through RemotEye III must have permission.

By default, the RemotEye III will allow any workstation the ability to write new configuration information to RemotEye III and its attached Toshiba UPS. This is accomplished through SNMP sets using the default read/write community string.

To restrict access to only NMS machines, the SNMP Communities and Control Group of RemotEye III must be programmed accordingly. See the section entitled SNMP Communities on page 32 for details on adding workstations to the SNMP Communities.

If the IP address of the NMS is not added to the SNMP Communities with Read/Write permissions, the NMS software can only read the status of the UPS, and changes to UPS parameters will be prohibited.

NMS (Manager) Settings

There are two areas of consideration when coordinating an NMS with a RemotEye III. First, the Manager software on the NMS must be prepared to handle the RemotEye III Management Information Base (MIB), and second, the Manager must be configured to receive any traps the RemotEye III sends.

Importing the MIB File

The MIB file, ToshibaRMTI3.mib, is contained on the included CD-ROM. This file describes the information that is attainable from a Toshiba UPS.

The Toshiba MIB file must be manually entered (imported or compiled) into the Manger database. For instruction on incorporating private MIB files into the Manager, consult the Manager software documentation.

MIB Import Example

This example shows how to incorporate the Toshiba MIB into the Manager application HP OpenView Workgroup Node Manager. The software runs on the Windows platform.

Launch HP OpenView Workgroup Node Manager.

From the Control pull down menu, click SNMP Manager→ Manage Database→ Select → (map to the MIB file, ToshibaRMTI3.mib, on the included CDROM) → click ADD.

Click Close to close the SNMP Manager Database.

Specifying Trap Receivers

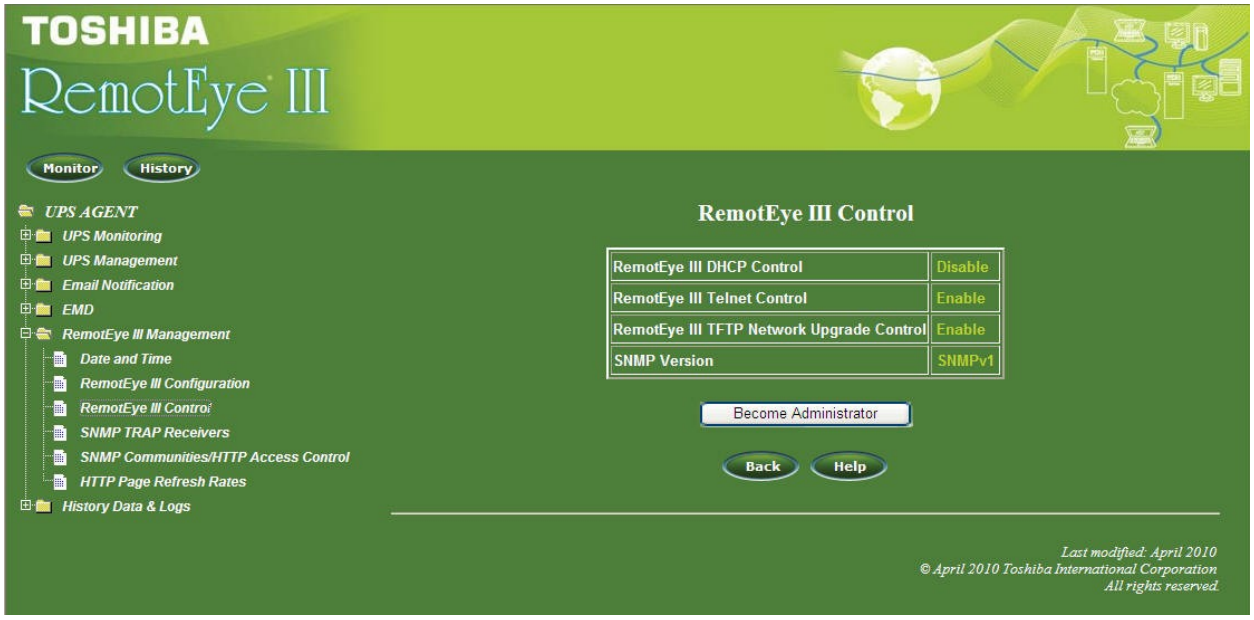
To send traps to an NMS, the NMS must be designated as a trap receiver of the RemotEye III. See Trap Receiver Table section on page 34 for instruction on defining a trap receiver.

Configuring the Trap Receiver

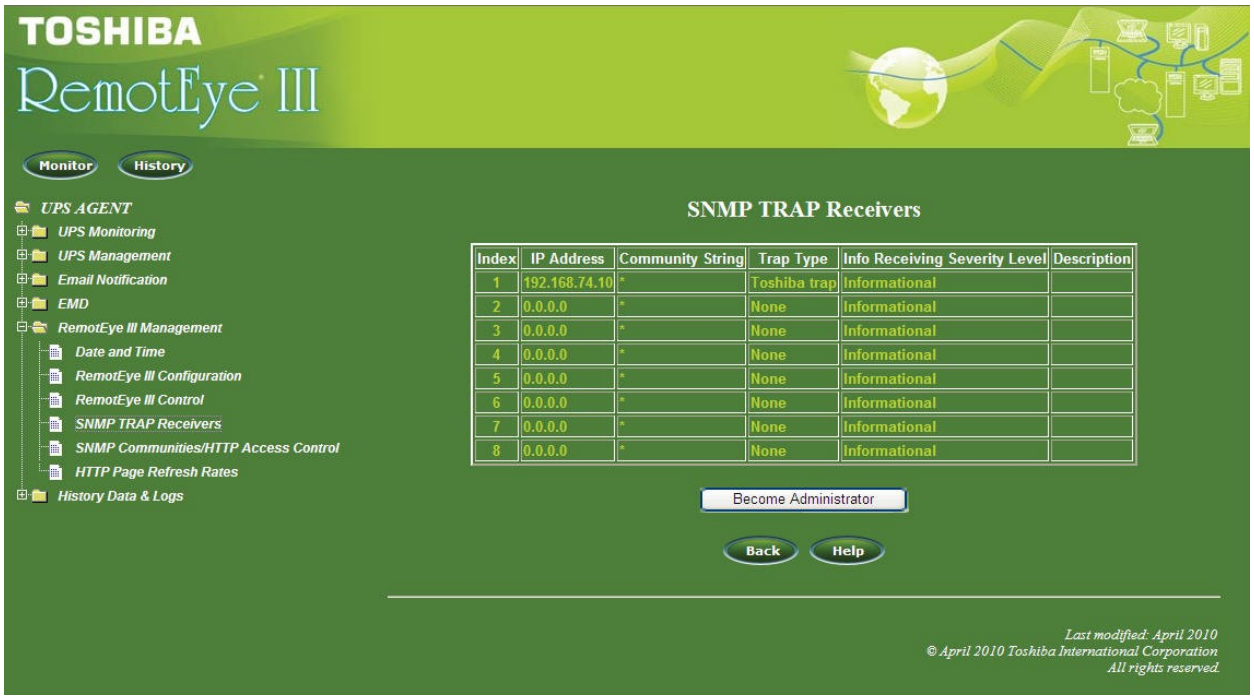
The trap handler of a Manager application varies between software developers. For specific information about a trap handler, consult the Manager software documentation.

Follow the following steps to setup trap receivers.

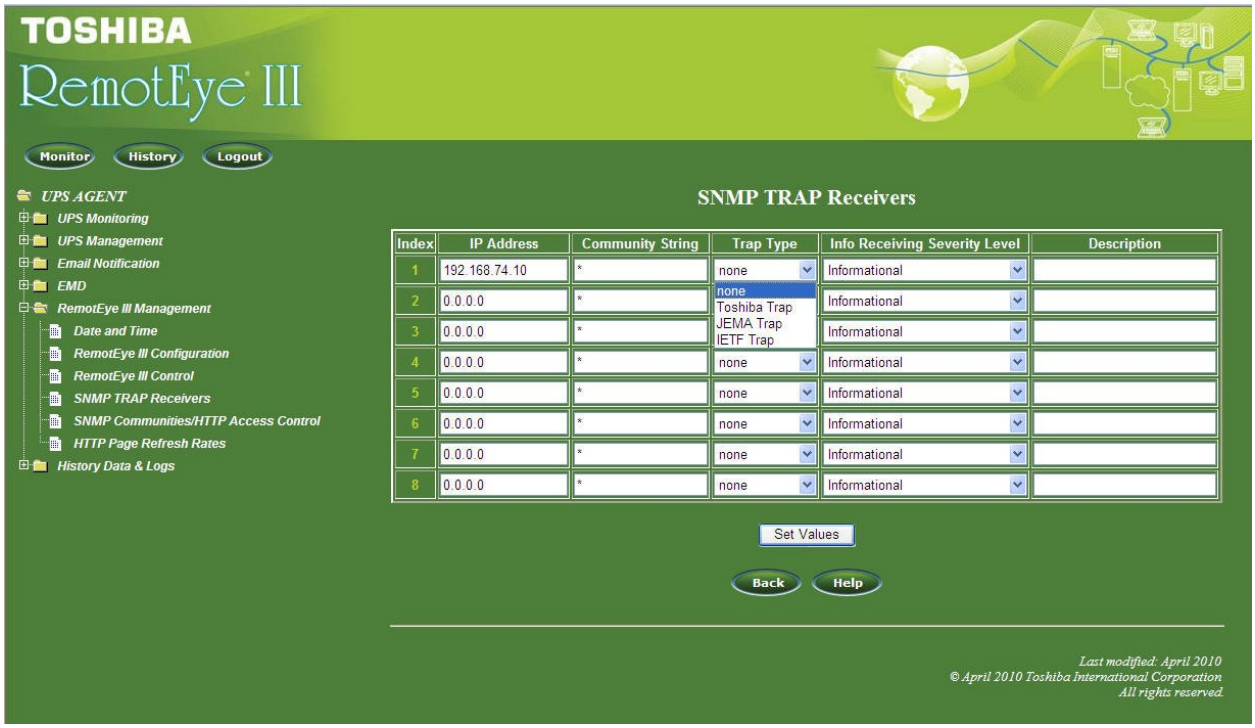
1. Open RemotEye III on internet browser and go to RemotEye III Management -> RemotEye III Control to check SNMP version



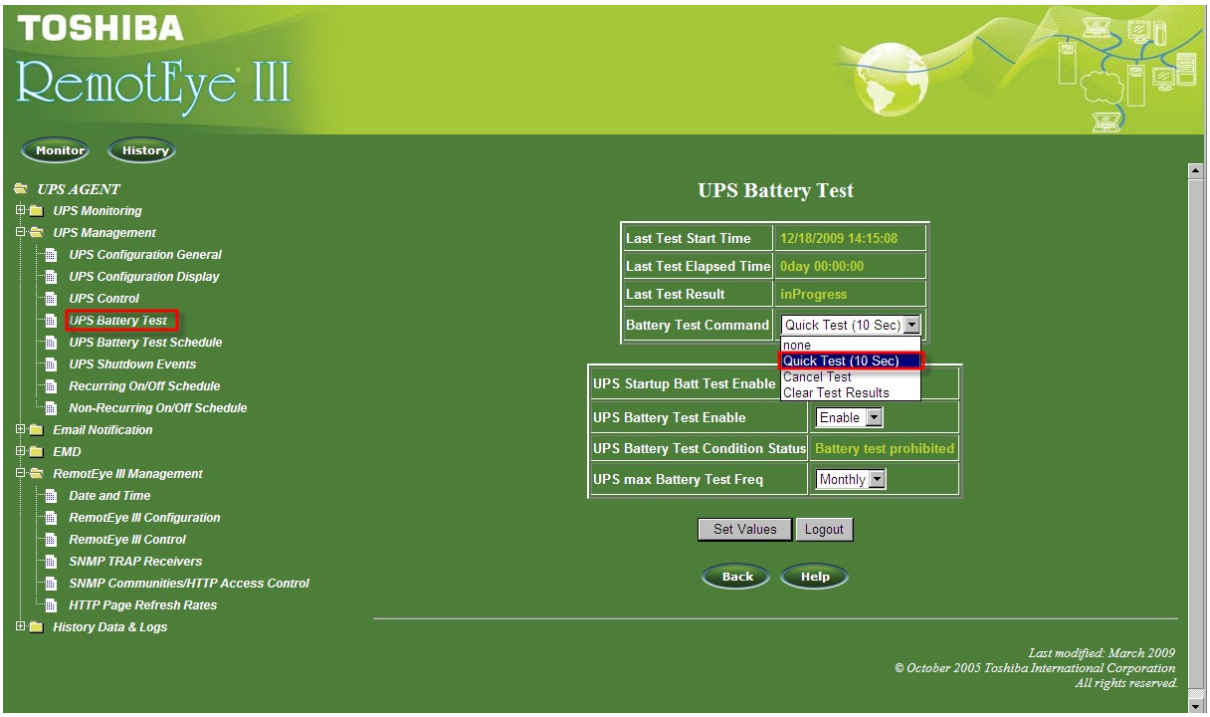
2. Go to RemotEye III Management -> SNMP TRAP Receivers and Become Administrator



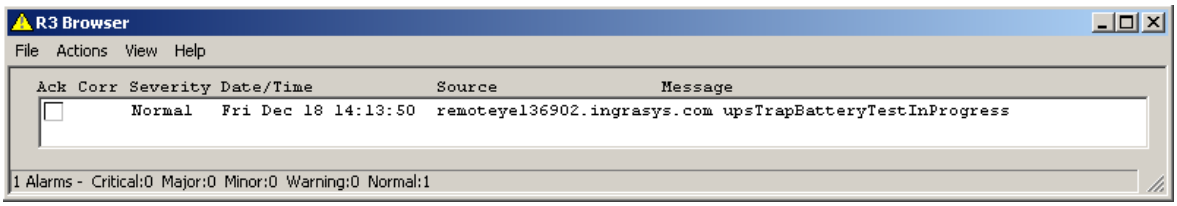
3. Enter trap receiver IP address and select Trap Type as Toshiba or JEMA or IETF then set value.



Following shows an example of a trap trigger by Battery Test Command as "Quick Test (10 Sec)



5. User will receive battery test in progress trap


R3 Browser
File Actions View Help
Ack Corr Severity Date/Time Source Message
Normal Fri Dec 18 14:13:50 remoteyel36902.ingrasys.com upsTrapBatteryTestInProgress
1 Alarms - Critical:0 Major:0 Minor:0 Warning:0 Normal:1

Note: If SNMP version is SNMPv1, SNMP tool must SNMPv1.

Connecting to the RemotEye III via SNMP

Executing SNMP Gets and Sets

Besides receiving traps, an NMS can perform the valuable functions of SNMP gets and sets through RemotEye III.

An SNMP get entails retrieving information. This is a request from a Manager to an Agent for information the Agent has collected.

An SNMP set entails configuring a device parameter. This is a command from a Manager to an Agent instructing the Agent to change some setup parameter. The setup parameter may apply to the agent or the agent's network device for which it is responsible.

SNMP Get/Set Criteria

Successful SNMP gets and sets from an NMS depend upon RemotEye III settings. The RemotEye III acts as a shield, refusing access to machines that do not meet its setup criteria. If the RemotEye III provides an NMS with Read access, SNMP gets are allowed, if RemotEye III provides NMS with Write access, both SNMP gets and SNMP sets are allowed.

The RemotEye III uses the community values listed in the RemotEye III Control Group and the entries listed in the SNMP Communities to render get/set requests from network machines. The evaluation techniques are described in the following sections.

NMS Unlisted in SNMP Communities

If an NMS is not listed in the SNMP Communities, the global RemotEye III communities are used for evaluation. The global communities are set within the Control Group table of the RemotEye III. If a get request matches either the Community Read-Only or the Community Read/Write values, the request is honored. A set, however, is only allowed if the request includes the Community Read/Write value.

NMS Listed in SNMP Communities

If the NMS appears in the SNMP Communities with Read or Read/Write Access rights, the corresponding community name and privileges listed within this table, in conjunction with the global community values, are used to evaluate the request.

If the NMS community listing matches any of the global communities, the SNMP Communities table listing will override the permissions established by the global listings. First, the SNMP Communities entry negates both global values, and second, the permissions for this entry will apply to requests from the NMS.

If the NMS appears in the SNMP Communities multiple times, using the same community, the entry with the highest priority (lowest line number) is used to evaluate the request though this community name.

If a NoAccess listing for the NMS appears anywhere in the table, the permissions assigned by the global community names are negated. Any request from the NMS using the global community names will be refused. In addition, only SNMP Communities entries with higher priority are applicable. To complete SNMP get or sets from this NMS, an entry above the NoAccess line must assign the NMS Read or Read/Write permissions.

If the highest priority listing for an NMS in the SNMP Communities labels the machine with access rights as NoAccess, no get/set requests from this machine, regardless of its community string, are permitted.

SNMP Get/Set Examples

The following scenarios can be used to provide guidelines when configuring RemotEye III. In all the examples, assume the Control Group settings are:

Community Read-Only: ronly

Community Read/Write: rwrite

Also, assume the NMS has the IP Address 172.18.63.1.

Case #1: NMS is not listed in the SNMP Communities
Assume the SNMP Communities Table is empty.

Analysis: Any NMS get request will be honoured when using ronly or rwrite community string. Any NMS set requests will be honoured only when using rwrite community string.

Case #2: NMS is listed in SNMP Communities with additional community strings
SNMP Communities settings:

[1] 172.18.63.1 foobar Read/Write

[2] 172.18.63.1 reading Read

Analysis: Get requests from the NMS with IP 10 will be honoured when using the reading, foobar, rwrite or the ronly community strings. The NMS will have set ability when using either the foobar or the rwrite community strings.

Case #3: NMS is listed in the SNMP Communities using one of the global community strings.
SNMP Communities settings:

[1] 172.18.63.1 ronly Read/Write

Analysis: Both get and set requests from this NMS will be honoured when using the ronly community string. Any requests from NMS using rwrite, however, will be denied.

Case #4: NMS is listed in the SNMP Communities multiple times using the same community string.
SNMP Communities settings:

[1] 172.18.63.1 foobar Read

[2] 172.18.63.1 foobar Read/Write

Analysis: The NMS will only be allowed to use SNMP gets when using the community string foobar. This NMS can still use global community strings ronly for gets or rwrite for gets and sets as well.

Case #5: NMS is listed in the SNMP Communities under No Access.

SNMP Communities settings:

[1] 10.0.7.31 foobar Read

[2] 10.0.7.31 public No Access

Analysis: The NMS can perform only gets using the community string foobar. No other set or get requests will be honoured.

Case #6: NMS's first listing is in the SNMP Communities under NoAccess
Community Read-Only: ronly

Community Read/Write: rwrite

[1] 10.0.7.31 foobar No Access

[2] 10.0.7.31 public Read/Write

Analysis: All NMS get or set requests are refused.

Toshiba MIB

The MIB is a set of objects that are processed via a network protocol. These objects determine what UPS parameters may be monitored and controlled using SNMP requests.

The RemotEye III communication implements standard MIB II and the following MIBs for TOSHIBA UPS

UPS MIB for Toshiba Uninterruptible Power Supplies:

{ iso(1) org(3) dod(6) internet(1) private(4) enterprises(1) toshiba(186) equ(1) equups(19) ticups(2) RMTI3(3) }

```
--================================================================================

TOSHIBAUPS-MIB DEFINITIONS ::= BEGIN

--================================================================================

IMPORTS
  DisplayString, TimeStamp, TimeInterval, TestAndIncr, AutonomousType
    FROM SNMPv2-TC
  enterprises
    FROM RFC1155-SMI
  OBJECT-TYPE
    FROM RFC-1212
  TRAP-TYPE
    FROM RFC-1215

toshiba      OBJECT IDENTIFIER ::= { enterprises 186 }
equ          OBJECT IDENTIFIER ::= { toshiba 1 }
equUPS       OBJECT IDENTIFIER ::= { equ 19 }
ticUPS       OBJECT IDENTIFIER ::= { equUPS 2 }
rmti3        OBJECT IDENTIFIER ::= { ticUPS 3 }

upsIdent     OBJECT IDENTIFIER ::= { rmti3 1 }
upsInput     OBJECT IDENTIFIER ::= { rmti3 2 }
upsOutput    OBJECT IDENTIFIER ::= { rmti3 3 }
upsBypass    OBJECT IDENTIFIER ::= { rmti3 4 }
upsDCBus     OBJECT IDENTIFIER ::= { rmti3 5 }
upsBattery   OBJECT IDENTIFIER ::= { rmti3 6 }
upsStsCtlCfg OBJECT IDENTIFIER ::= { rmti3 7 }
upsHistory   OBJECT IDENTIFIER ::= { rmti3 8 }
upsDisplay   OBJECT IDENTIFIER ::= { rmti3 9 }
```

upsAlarm OBJECT IDENTIFIER ::= { rmti3 10 }
upsPassword OBJECT IDENTIFIER ::= { rmti3 11 }
upsAgent OBJECT IDENTIFIER ::= { rmti3 12 }
upsConnectedClients OBJECT IDENTIFIER ::= { rmti3 13 }
upsEmail OBJECT IDENTIFIER ::= { rmti3 14 }
upsSNMP OBJECT IDENTIFIER ::= { rmti3 15 }
upsEMD OBJECT IDENTIFIER ::= { rmti3 16 }
upsTrap OBJECT IDENTIFIER ::= { rmti3 21 }

upsIdent (1.3.6.1.4.1.186.1.19.2.3.1)
upsIdentManufacturer (1.3.6.1.4.1.186.1.19.2.3.1.1)
upsIdentTypeform (1.3.6.1.4.1.186.1.19.2.3.1.2)
upsIdentSerialNumber (1.3.6.1.4.1.186.1.19.2.3.1.3)
upsIdentMainFirmwareVersion (1.3.6.1.4.1.186.1.19.2.3.1.4)
upsIdentMainBootSectorVersion (1.3.6.1.4.1.186.1.19.2.3.1.5)
upsIdentMainBootLoaderVersion (1.3.6.1.4.1.186.1.19.2.3.1.6)
upsIdentJobNumber (1.3.6.1.4.1.186.1.19.2.3.1.7)
upsIdentTestPerson (1.3.6.1.4.1.186.1.19.2.3.1.8)
upsIdentTestDate (1.3.6.1.4.1.186.1.19.2.3.1.9)
upsIdentHardwareBuildDate (1.3.6.1.4.1.186.1.19.2.3.1.10)
upsIdentEEPROMVersion (1.3.6.1.4.1.186.1.19.2.3.1.11)
upsIdentSysName (1.3.6.1.4.1.186.1.19.2.3.1.12)
upsIdentAttachedDevices (1.3.6.1.4.1.186.1.19.2.3.1.13)
upsIdentInstallationDate (1.3.6.1.4.1.186.1.19.2.3.1.14)

upsInput(1.3.6.1.4.1.186.1.19.2.3.2)

upsInputPowerSupplyConfiguration (1.3.6.1.4.1.186.1.19.2.3.2.1)
upsInputNumLines (1.3.6.1.4.1.186.1.19.2.3.2.2)
upsInputTable (1.3.6.1.4.1.186.1.19.2.3.2.3)
upsInputEntry (1.3.6.1.4.1.186.1.19.2.3.2.3.1)
upsInputIndex OBJECT-TYPE
upsInputFrequency OBJECT-TYPE
upsInputVoltage OBJECT-TYPE
upsInputCurrent OBJECT-TYPE
upsInputActivePower (1.3.6.1.4.1.186.1.19.2.3.2.4)
upsInputApparentPower (1.3.6.1.4.1.186.1.19.2.3.2.5)
upsInputPowerFactor (1.3.6.1.4.1.186.1.19.2.3.2.6)
upsInputRatedTable (1.3.6.1.4.1.186.1.19.2.3.2.7)

upsInputRatedEntry (1.3.6.1.4.1.186.1.19.2.3.2.7.1)
upsInputSlotIndex OBJECT-TYPE
upsInputRatedFrequency OBJECT-TYPE
upsInputRatedVoltage OBJECT-TYPE
upsInputRatedCurrent OBJECT-TYPE
upsInputOverVoltage (1.3.6.1.4.1.186.1.19.2.3.2.8)
upsInputOverVoltageRecoverylevel (1.3.6.1.4.1.186.1.19.2.3.2.9)
upsInputVoltagePercent (1.3.6.1.4.1.186.1.19.2.3.2.10)
upsInputCurrentPercent (1.3.6.1.4.1.186.1.19.2.3.2.11)
upsInputUnderVoltageDetectlevel (1.3.6.1.4.1.186.1.19.2.3.2.12)
upsInputUnderVoltageRecoverylevel (1.3.6.1.4.1.186.1.19.2.3.2.13)
upsInputRatedActivePower (1.3.6.1.4.1.186.1.19.2.3.2.14)
upsInputFreqWithErr (1.3.6.1.4.1.186.1.19.2.3.2.15)

upsOutput(1.3.6.1.4.1.186.1.19.2.3.3)

upsOutputPowerSupplyConfiguration (1.3.6.1.4.1.186.1.19.2.3.3.1)
upsOutputNumLines (1.3.6.1.4.1.186.1.19.2.3.3.2)
upsOutputTable (1.3.6.1.4.1.186.1.19.2.3.3.3)
upsOutputEntry (1.3.6.1.4.1.186.1.19.2.3.3.3.1)
upsOutputLineIndex OBJECT-TYPE
upsOutputFrequency OBJECT-TYPE
upsOutputVoltage OBJECT-TYPE
upsOutputCurrent OBJECT-TYPE
upsOutputActivePower OBJECT-TYPE
upsOutputApparentPower OBJECT-TYPE
upsOutputLoadPercentage (1.3.6.1.4.1.186.1.19.2.3.3.4)
upsOutputRatedTable (1.3.6.1.4.1.186.1.19.2.3.3.5)
upsOutputRatedEntry (1.3.6.1.4.1.186.1.19.2.3.3.5.1)
upsOutputSlotIndex OBJECT-TYPE
upsOutputRatedFrequency OBJECT-TYPE
upsOutputRatedVoltage OBJECT-TYPE
upsOutputRatedCurrent OBJECT-TYPE
upsOutputRatedActivePower OBJECT-TYPE
upsOutputRatedApparentPower OBJECT-TYPE
upsOutputUndervoltagelevel (1.3.6.1.4.1.186.1.19.2.3.3.6)
upsOutputOverVoltagelevel (1.3.6.1.4.1.186.1.19.2.3.3.7)
upsOutputFrequencySynchRange (1.3.6.1.4.1.186.1.19.2.3.3.8)
upsOutputVoltageAdjust (1.3.6.1.4.1.186.1.19.2.3.3.9)

upsOutputRatedPowerFactor (1.3.6.1.4.1.186.1.19.2.3.3.10)

upsBypass(1.3.6.1.4.1.186.1.19.2.3.4)

upsBypassPowerSupplyConfiguration (1.3.6.1.4.1.186.1.19.2.3.4.1)
upsBypassNumLine (1.3.6.1.4.1.186.1.19.2.3.4.2)
upsBypassTable (1.3.6.1.4.1.186.1.19.2.3.4.3)
upsBypassEntry (1.3.6.1.4.1.186.1.19.2.3.4.3.1)
upsBypassIndex OBJECT-TYPE
upsBypassFrequency OBJECT-TYPE
upsBypassVoltage OBJECT-TYPE
upsBypassCurrent OBJECT-TYPE
upsBypassApparentPower (1.3.6.1.4.1.186.1.19.2.3.4.4)
upsBypassUnderVoltageDetectionlevel (1.3.6.1.4.1.186.1.19.2.3.4.5)
upsBypassUnderVoltageRecoverylevel (1.3.6.1.4.1.186.1.19.2.3.4.6)
upsBypassOverVoltageDetectionlevel (1.3.6.1.4.1.186.1.19.2.3.4.7)
upsBypassOverVoltageRecoverylevel (1.3.6.1.4.1.186.1.19.2.3.4.8)

upsDCBus(1.3.6.1.4.1.186.1.19.2.3.5)

upsDCBusTotalVoltage (1.3.6.1.4.1.186.1.19.2.3.5.1)
upsDCBusPositiveVoltage (1.3.6.1.4.1.186.1.19.2.3.5.2)
upsDCBusNegativeVoltage (1.3.6.1.4.1.186.1.19.2.3.5.3)
upsDCBusRatedVoltage (1.3.6.1.4.1.186.1.19.2.3.5.4)

upsBattery (1.3.6.1.4.1.186.1.19.2.3.6)

upsBatteryStatus (1.3.6.1.4.1.186.1.19.2.3.6.1)
upsSecondsOnBattery (1.3.6.1.4.1.186.1.19.2.3.6.2)
upsBatteryVoltage (1.3.6.1.4.1.186.1.19.2.3.6.3)
upsBatteryDischargeCurrent (1.3.6.1.4.1.186.1.19.2.3.6.4)
upsBatteryChargeStatus (1.3.6.1.4.1.186.1.19.2.3.6.5)
upsBatteryNumberofDischarge (1.3.6.1.4.1.186.1.19.2.3.6.6)
upsBatteryCalculatedShutdownVoltage (1.3.6.1.4.1.186.1.19.2.3.6.7)
upsBatteryLifeRemaining (1.3.6.1.4.1.186.1.19.2.3.6.8)
upsBatteryRatedAmpereHour (1.3.6.1.4.1.186.1.19.2.3.6.9)
upsBatteryInSeries (1.3.6.1.4.1.186.1.19.2.3.6.10)
upsBatteryInParallel (1.3.6.1.4.1.186.1.19.2.3.6.11)
upsBatteryInstallationDate (1.3.6.1.4.1.186.1.19.2.3.6.12)

upsBatteryVoltageShutdownLevel (1.3.6.1.4.1.186.1.19.2.3.6.13)
upsBatteryExtTable (1.3.6.1.4.1.186.1.19.2.3.6.14)
upsBatteryExtEntry (1.3.6.1.4.1.186.1.19.2.3.6.14.1)
upsBatteryExtIndex OBJECT-TYPE
upsBatteryExtInstallStatus OBJECT-TYPE
upsBatteryExtInSeries OBJECT-TYPE
upsBatteryExtInParallel OBJECT-TYPE
upsBatteryExtRatedAmpereHour OBJECT-TYPE
upsBatteryExtCRate OBJECT-TYPE
upsBatteryExtInstallDate OBJECT-TYPE
upsBatteryLowBattLevel (1.3.6.1.4.1.186.1.19.2.3.6.15)
upsBatteryChargerOverVoltageDelay(1.3.6.1.4.1.186.1.19.2.3.6.16)
upsBatteryCalcLBLevel (1.3.6.1.4.1.186.1.19.2.3.6.17)

upsStsCtlCfg (1.3.6.1.4.1.186.1.19.2.3.7)

upsStsCtlCfgSystemTemperature (1.3.6.1.4.1.186.1.19.2.3.7.1)
upsStsCtlCfgBatteryTemperature (1.3.6.1.4.1.186.1.19.2.3.7.2)
upsStsCtlCfgPresentMode (1.3.6.1.4.1.186.1.19.2.3.7.3)
upsStsCtlCfgModeRequest (1.3.6.1.4.1.186.1.19.2.3.7.4)
upsStsCtlCfgModeTransitionTimer (1.3.6.1.4.1.186.1.19.2.3.7.5)
upsStsCtlCfgEPOContactState (1.3.6.1.4.1.186.1.19.2.3.7.6)
upsStsCtlCfgRunStopSwitchState (1.3.6.1.4.1.186.1.19.2.3.7.7)
upsStsCtlCfgServicePortCommStatus (1.3.6.1.4.1.186.1.19.2.3.7.8)
upsStsCtlCfgInternalCommStatus (1.3.6.1.4.1.186.1.19.2.3.7.9)
upsStsCtlCfgSecurityLevel (1.3.6.1.4.1.186.1.19.2.3.7.10)
upsStsCtlCfgPresentDate (1.3.6.1.4.1.186.1.19.2.3.7.11)
upsStsCtlCfgPresentTime (1.3.6.1.4.1.186.1.19.2.3.7.12)
upsStsCtlCfgPresentTimeStamp (1.3.6.1.4.1.186.1.19.2.3.7.13)
upsStsCtlCfgEnableRMTIToControlMode (1.3.6.1.4.1.186.1.19.2.3.7.14)
upsStsCtlCfgEnableStartupDelay (1.3.6.1.4.1.186.1.19.2.3.7.15)
upsStsCtlCfgStartUpDelayMode (1.3.6.1.4.1.186.1.19.2.3.7.16)
upsStsCtlCfgStartUpDelay (1.3.6.1.4.1.186.1.19.2.3.7.17)
upsStsCtlCfgRemoteShutDownContactState (1.3.6.1.4.1.186.1.19.2.3.7.18)
upsStsCtlCfgRemoteShutdownContactMode (1.3.6.1.4.1.186.1.19.2.3.7.19)
upsStsCtlCfgEnableDryContactLANShutdown (1.3.6.1.4.1.186.1.19.2.3.7.20)
upsStsCtlCfgDryContactLANShutdownTimer (1.3.6.1.4.1.186.1.19.2.3.7.21)
upsStsCtlCfgDryContactOnBattDelay (1.3.6.1.4.1.186.1.19.2.3.7.22)
upsStsCtlCfgDryContactLowBattDelay (1.3.6.1.4.1.186.1.19.2.3.7.23)

upsStsCtlCfgEnableStartupBattTest (1.3.6.1.4.1.186.1.19.2.3.7.24)
upsStsCtlCfgEnableBatteryTest (1.3.6.1.4.1.186.1.19.2.3.7.25)
upsStsCtlCfgBatteryTestConditionStatus (1.3.6.1.4.1.186.1.19.2.3.7.26)
upsStsCtlCfgMaxBatteryTestFreq (1.3.6.1.4.1.186.1.19.2.3.7.27)
upsStsCtlCfgEnableRestartAfterBattShutdown (1.3.6.1.4.1.186.1.19.2.3.7.28)
upsStsCtlCfgRestartDelay (1.3.6.1.4.1.186.1.19.2.3.7.29)
upsStsCtlCfgAutoTransferMode (1.3.6.1.4.1.186.1.19.2.3.7.30)
upsStsCtlCfgAutoRetransferDelay (1.3.6.1.4.1.186.1.19.2.3.7.31)
upsStsCtlCfgServicePortCommSetting (1.3.6.1.4.1.186.1.19.2.3.7.32)
upsStsCtlCfgInvertRemoteShutdownLogic (1.3.6.1.4.1.186.1.19.2.3.7.33)
upsStsCtlCfgRestartMode (1.3.6.1.4.1.186.1.19.2.3.7.34)

upsHistory (1.3.6.1.4.1.186.1.19.2.3.8)

upsHistorySysOperationTime (1.3.6.1.4.1.186.1.19.2.3.8.1)
upsHistoryInverterOperationTime (1.3.6.1.4.1.186.1.19.2.3.8.2)
upsHistoryBackupOperationTime (1.3.6.1.4.1.186.1.19.2.3.8.3)
upsHistoryLifetimeRemaining (1.3.6.1.4.1.186.1.19.2.3.8.4)
upsHistoryHighestSystemTemp (1.3.6.1.4.1.186.1.19.2.3.8.5)
upsHistoryHighestBatteryTemp (1.3.6.1.4.1.186.1.19.2.3.8.6)
upsHistoryTotalNumInputUnderVolt (1.3.6.1.4.1.186.1.19.2.3.8.7)
upsHistoryTotalNumOverload (1.3.6.1.4.1.186.1.19.2.3.8.8)
upsHistoryTotalNumTest (1.3.6.1.4.1.186.1.19.2.3.8.9)
upsHistoryTotalNumBackup (1.3.6.1.4.1.186.1.19.2.3.8.11)
upsHistoryTotalNumFaults (1.3.6.1.4.1.186.1.19.2.3.8.13)
upsHistoryTotalNumOperationModeChange (1.3.6.1.4.1.186.1.19.2.3.8.15)
upsHistoryTotalNumWarnings (1.3.6.1.4.1.186.1.19.2.3.8.17)
upsHistoryTotalNumSystemSettingsChanged (1.3.6.1.4.1.186.1.19.2.3.8.19)
upsHistoryTotalNumResets (1.3.6.1.4.1.186.1.19.2.3.8.21)

upsDisplay(1.3.6.1.4.1.186.1.19.2.3.9)

upsDisplayFirmwareVersion (1.3.6.1.4.1.186.1.19.2.3.9.1)
upsDisplayBootSectorVersion (1.3.6.1.4.1.186.1.19.2.3.9.2)
upsDisplayBootLoaderVersion (1.3.6.1.4.1.186.1.19.2.3.9.3)
upsDisplaySleepTimer (1.3.6.1.4.1.186.1.19.2.3.9.4)
upsDisplayBuzzerMode (1.3.6.1.4.1.186.1.19.2.3.9.5)
upsDisplayBuzzerStatus (1.3.6.1.4.1.186.1.19.2.3.9.6)
upsDisplayRMTIInstallDate (1.3.6.1.4.1.186.1.19.2.3.9.7)

upsDisplayRMTIInstallStatus (1.3.6.1.4.1.186.1.19.2.3.9.8)
upsDisplayOptionBaudRate (1.3.6.1.4.1.186.1.19.2.3.9.9)
upsDisplayRMTIDataLink (1.3.6.1.4.1.186.1.19.2.3.9.10)
upsDisplayRMTINetworkLink (1.3.6.1.4.1.186.1.19.2.3.9.11)

upsAlarm (1.3.6.1.4.1.186.1.19.2.3.10)

upsAlarmsPresent (1.3.6.1.4.1.186.1.19.2.3.10.1)
upsAlarmTable (1.3.6.1.4.1.186.1.19.2.3.10.2)
upsAlarmEntry (1.3.6.1.4.1.186.1.19.2.3.10.2.1)
upsAlarmId OBJECT-TYPE
upsAlarmDescr OBJECT-TYPE
upsAlarmTime OBJECT-TYPE
upsWellKnownAlarms (1.3.6.1.4.1.186.1.19.2.3.10.3)
upsAlarmFault OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.1)
upsAlarmOpenFuse OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.2)
upsAlarmCurrentLimitFault OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.3)
upsAlarmDCBusOverCurrent OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.4)
upsAlarmDCOverVoltage OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.5)
upsAlarmDCBusImbalance OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.6)
upsAlarmOutputUnderVoltage OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.7)
upsAlarmOutputOverVoltage OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.8)
upsAlarmHeatSinkOverheat OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.9)
upsAlarmBypassOverload OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.10)
upsAlarmChargerOverVoltageFault OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.11)
upsAlarmOutputOverCurrent OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.12)
upsAlarmDCUnderVoltAtBoostUp OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.13)
upsAlarmDCUnderVoltAtCharge OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.14)
upsAlarmBypassOverheat OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.15)
upsAlarmResettableInverterOverload OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.16)
upsAlarmUnresettableInverterOverload OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.17)
upsAlarmInputOverVoltage OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.18)
upsAlarmInputUnderVoltage OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.19)
upsAlarmInputFrequencyError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.20)
upsAlarmBypassOverVoltage OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.21)
upsAlarmBypassUnderVoltage OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.22)
upsAlarmBypassFrequencyError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.23)
upsAlarmDCUnderVoltAtTest OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.24)
upsAlarmBatteryLow OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.25)

upsAlarmBatteryAtShutdownlevel OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.26)
upsAlarmReplaceBattery OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.27)
upsAlarmChargerOverVoltageWarning OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.28)
upsAlarmBatteryTestFailed OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.29)
upsAlarmBatteryDepleted OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.30)
upsAlarmBatteryOverheat OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.31)
upsAlarmSystemOverheat OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.32)
upsAlarmOutputOverloadWarning OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.33)
upsAlarmCurrentLimitWarning OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.34)
upsAlarmAsyncOperation OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.35)
upsAlarmServiceUPS OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.36)
upsAlarmBatteryNearExpiration OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.37)
upsAlarmBatteryExpired OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.38)
upsAlarmDisplayCableError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.39)
upsAlarmRemotEyeCommError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.40)
upsAlarmRemotEyeUplinkCommError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.41)
upsAlarmServicePortCommError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.42)
upsAlarmDispCommError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.43)
upsAlarmSystemTestFailed OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.44)
upsAlarmBypassOn OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.45)
upsAlarmPowerFailure OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.46)
upsAlarmShutdownPending OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.47)
upsAlarmOutputOffAsRequested OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.48)
upsAlarmOutputOff OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.49)
upsAlarmBatteryTestInProgress OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.50)
upsAlarmBatteryOn OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.51)
upsAlarmEMDSensor1AlarmTriggered OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.52)
upsAlarmEMDSensor2AlarmTriggered OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.53)
upsAlarmEMDHumidityAtLowCiriticalPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.54)
upsAlarmEMDHumidityAtHighCiriticalPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.55)
upsAlarmEMDHumidityAtLowWarningPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.56)
upsAlarmEMDHumidityAtHighWarningPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.57)
upsAlarmEMDTemperatureAtLowCiriticalPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.58)
upsAlarmEMDTemperatureAtHighCiriticalPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.59)
upsAlarmEMDTemperatureAtLowWarningPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.60)
upsAlarmEMDTemperatureAtHighWarningPoint OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.61)
upsAlarmLoginError OBJECT-TYPE (1.3.6.1.4.1.186.1.19.2.3.10.3.62)

upsPassword(1.3.6.1.4.1.186.1.19.2.3.11)

upsPwdAdminCurrentAccessLevel (1.3.6.1.4.1.186.1.19.2.3.11.1)
upsPwdAdminCurrentLogin (1.3.6.1.4.1.186.1.19.2.3.11.2)
upsPwdAdminNewLoginAccess (1.3.6.1.4.1.186.1.19.2.3.11.3)
upsPwdAdminCurrentPswd (1.3.6.1.4.1.186.1.19.2.3.11.4)
upsPwdAdminNewPswd (1.3.6.1.4.1.186.1.19.2.3.11.5)

upsAgent(1.3.6.1.4.1.186.1.19.2.3.12)

upsAgentSoftwareVersion (1.3.6.1.4.1.186.1.19.2.3.12.1)
upsAgentHardwareAddress (1.3.6.1.4.1.186.1.19.2.3.12.2)
upsAgentIPAddress (1.3.6.1.4.1.186.1.19.2.3.12.3)
upsAgentGatewayAddress (1.3.6.1.4.1.186.1.19.2.3.12.4)
upsAgentSubnetMask (1.3.6.1.4.1.186.1.19.2.3.12.5)
upsAgentDate (1.3.6.1.4.1.186.1.19.2.3.12.6)
upsAgentTime (1.3.6.1.4.1.186.1.19.2.3.12.7)
upsAgentGeneralRecordLogFrequency (1.3.6.1.4.1.186.1.19.2.3.12.8)
upsAgentPollingRate (1.3.6.1.4.1.186.1.19.2.3.12.9)
upsAgentDHCPControl (1.3.6.1.4.1.186.1.19.2.3.12.10)
upsAgentTelnetControl (1.3.6.1.4.1.186.1.19.2.3.12.11)
upsAgentTFTPControl (1.3.6.1.4.1.186.1.19.2.3.12.12)
upsAgentResetToDefault (1.3.6.1.4.1.186.1.19.2.3.12.13)
upsAgentRestart (1.3.6.1.4.1.186.1.19.2.3.12.14)
upsAgentyStemName (1.3.6.1.4.1.186.1.19.2.3.12.15)
upsAgentyStemContact (1.3.6.1.4.1.186.1.19.2.3.12.16)
upsAgentyStemLocation (1.3.6.1.4.1.186.1.19.2.3.12.17)
upsAgentyDefaultLanguage (1.3.6.1.4.1.186.1.19.2.3.12.18)
upsAgentClearGeneralHistory (1.3.6.1.4.1.186.1.19.2.3.12.19)
upsAgentClearTestHistory (1.3.6.1.4.1.186.1.19.2.3.12.20)
upsAgentClearBackUpHistory (1.3.6.1.4.1.186.1.19.2.3.12.21)
upsAgentClearFaultHistory (1.3.6.1.4.1.186.1.19.2.3.12.22)
upsAgentClearOperationModeHistory (1.3.6.1.4.1.186.1.19.2.3.12.23)
upsAgentClearWarningHistory (1.3.6.1.4.1.186.1.19.2.3.12.24)
upsAgentClearSystemSettingChangeHistory (1.3.6.1.4.1.186.1.19.2.3.12.25)
upsAgentClearRMTIEventLog (1.3.6.1.4.1.186.1.19.2.3.12.26)

upsConnectedClients(1.3.6.1.4.1.186.1.19.2.3.13)

upsConnectedClientsNumber (1.3.6.1.4.1.186.1.19.2.3.13.1)

upsConnectedClientsTable (1.3.6.1.4.1.186.1.19.2.3.13.2)
upsConnectedClientsEntry (1.3.6.1.4.1.186.1.19.2.3.13.2.1)
upsConnectedClientsIndex OBJECT-TYPE
upsConnectedClientsIPAddress OBJECT-TYPE
upsConnectedClientsName OBJECT-TYPE
upsConnectedClientsTimeAtConnection OBJECT-TYPE
upsConnectedClientsShutdownDelay OBJECT-TYPE

upsEmail(1.3.6.1.4.1.186.1.19.2.3.14)

upsEmailMailServer (1.3.6.1.4.1.186.1.19.2.3.14.1)
upsEmailUserAccount (1.3.6.1.4.1.186.1.19.2.3.14.2)
upsemailPassword (1.3.6.1.4.1.186.1.19.2.3.14.3)
upsEmailDomainName (1.3.6.1.4.1.186.1.19.2.3.14.4)
upsEmailDNSServer (1.3.6.1.4.1.186.1.19.2.3.14.5)
upsEmailStatusReportSendTime (1.3.6.1.4.1.186.1.19.2.3.14.6)
upsEmailClientsTable (1.3.6.1.4.1.186.1.19.2.3.14.7)
upsEmailClientEntry (1.3.6.1.4.1.186.1.19.2.3.14.7.1)
upsEmailClientsIndex OBJECT-TYPE
upsEmailClientsEmailAddress OBJECT-TYPE
upsEmailClientsDescription OBJECT-TYPE
upsEmailClientsInfoType OBJECT-TYPE
upsEmailClientsInfoLevel OBJECT-TYPE

upsSNMP(1.3.6.1.4.1.186.1.19.2.3.15)

upsSNMPVersion (1.3.6.1.4.1.186.1.19.2.3.15.1)
upsSNMPTrapReceiversTable (1.3.6.1.4.1.186.1.19.2.3.15.2)
upsSNMPTrapReceiversEntry (1.3.6.1.4.1.186.1.19.2.3.15.2.1)
upsSNMPTrapReceiversIndex OBJECT-TYPE
upsSNMPTrapReceiversIPAddress OBJECT-TYPE-
upsSNMPTrapReceiversCommunityString OBJECT-TYPE
upsSNMPTrapReceiversTrapType OBJECT-TYPE
upsSNMPTrapReceiversInfoReceivingSeverityLevel OBJECT-TYPE
upsSNMPTrapReceiversDescrption OBJECT-TYPE
upsSNMPCommunitiesTable (1.3.6.1.4.1.186.1.19.2.3.15.3)
upsSNMPCommunitiesEntry (1.3.6.1.4.1.186.1.19.2.3.15.3.1)
upsSNMPCommunitiesIndex OBJECT-TYPE
upsSNMPCommunitiesIPAddress OBJECT-TYPE

upsSNMPCommunitiesAccessString OBJECT-TYPE
upsSNMPCommunitiesAccessMode OBJECT-TYPE

upsEMD(1.3.6.1.4.1.186.1.19.2.3.16)

upsEMDType (1.3.6.1.4.1.186.1.19.2.3.16.1)
upsEMDTemperature (1.3.6.1.4.1.186.1.19.2.3.16.2)
upsEMDTemperatureLowWarningSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.3)
upsEMDTemperatureLowCriticalSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.4)
upsEMDTemperatureHighWarningSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.5)
upsEMDTemperatureHighCriticalSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.6)
upsEMDTemperatureHysteresis (1.3.6.1.4.1.186.1.19.2.3.16.7)
upsEMDTemperatureCalibrationOffset (1.3.6.1.4.1.186.1.19.2.3.16.8)
upsEMDHumidity (1.3.6.1.4.1.186.1.19.2.3.16.9)
upsEMDHumidityLowWarningSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.10)
upsEMDHumidityLowCriticalSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.11)
upsEMDHumidityHighWarningSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.12)
upsEMDHumidityHighCriticalSetPoint (1.3.6.1.4.1.186.1.19.2.3.16.13)
upsEMDHumidityHysteresis (1.3.6.1.4.1.186.1.19.2.3.16.14)
upsEMDHumidityCalibrationOffset (1.3.6.1.4.1.186.1.19.2.3.16.15)
upsEMDR1Status (1.3.6.1.4.1.186.1.19.2.3.16.16)
upsEMDAlarmR1Enable (1.3.6.1.4.1.186.1.19.2.3.16.17)
upsEMDAlarmR1Hysteresis (1.3.6.1.4.1.186.1.19.2.3.16.18)
upsEMDR2Status (1.3.6.1.4.1.186.1.19.2.3.16.19)
upsEMDAlarmR2Enable (1.3.6.1.4.1.186.1.19.2.3.16.20)
upsEMDAlarmR2Hysteresis (1.3.6.1.4.1.186.1.19.2.3.16.21)

upsTrap(1.3.6.1.4.1.186.1.19.2.3.21)

upsTrapFault (1.3.6.1.4.1.186.1.19.2.3.21.1)
upsTrapFaultClear (1.3.6.1.4.1.186.1.19.2.3.21.2)
upsTrapOpenFuse (1.3.6.1.4.1.186.1.19.2.3.21.3)
upsTrapOpenFuseClear (1.3.6.1.4.1.186.1.19.2.3.21.4)
upsTrapCurrentLimitFault (1.3.6.1.4.1.186.1.19.2.3.21.5)
upsTrapCurrentLimitFaultClear (1.3.6.1.4.1.186.1.19.2.3.21.6)
upsTrapDCBusOverCurrent (1.3.6.1.4.1.186.1.19.2.3.21.7)
upsTrapDCBusOverCurrentClear (1.3.6.1.4.1.186.1.19.2.3.21.8)
upsTrapDCOverVoltage (1.3.6.1.4.1.186.1.19.2.3.21.9)
upsTrapDCOverVoltageClear (1.3.6.1.4.1.186.1.19.2.3.21.10)

upsTrapDCBusImbalance (1.3.6.1.4.1.186.1.19.2.3.21.11)
upsTrapDCBusImbalanceClear (1.3.6.1.4.1.186.1.19.2.3.21.12)
upsTrapOutputUnderVoltage (1.3.6.1.4.1.186.1.19.2.3.21.13)
upsTrapOutputUnderVoltageClear (1.3.6.1.4.1.186.1.19.2.3.21.14)
upsTrapOutputOverVoltage (1.3.6.1.4.1.186.1.19.2.3.21.15)
upsTrapOutputOverVoltageClear (1.3.6.1.4.1.186.1.19.2.3.21.16)
upsTrapHeatSinkOverheat (1.3.6.1.4.1.186.1.19.2.3.21.17)
upsTrapHeatSinkOverheatClear (1.3.6.1.4.1.186.1.19.2.3.21.18)
upsTrapBypassOverload (1.3.6.1.4.1.186.1.19.2.3.21.19)
upsTrapBypassOverloadClear (1.3.6.1.4.1.186.1.19.2.3.21.20)
upsTrapChargerOverVoltageFault (1.3.6.1.4.1.186.1.19.2.3.21.21)
upsTrapChargerOverVoltageFaultClear (1.3.6.1.4.1.186.1.19.2.3.21.22)
upsTrapOutputOverCurrent (1.3.6.1.4.1.186.1.19.2.3.21.23)
upsTrapOutputOverCurrentClear (1.3.6.1.4.1.186.1.19.2.3.21.24)
upsTrapDCUnderVoltAtBoostUp (1.3.6.1.4.1.186.1.19.2.3.21.25)
upsTrapDCUnderVoltAtBoostUpClear (1.3.6.1.4.1.186.1.19.2.3.21.26)
upsTrapDCUnderVoltAtCharge (1.3.6.1.4.1.186.1.19.2.3.21.27)
upsTrapDCUnderVoltAtChargeClear (1.3.6.1.4.1.186.1.19.2.3.21.28)
upsTrapBypassOverheat (1.3.6.1.4.1.186.1.19.2.3.21.29)
upsTrapBypassOverheatClear (1.3.6.1.4.1.186.1.19.2.3.21.30)
upsTrapResettableInverterOverload (1.3.6.1.4.1.186.1.19.2.3.21.31)
upsTrapResettableInverterOverloadClear (1.3.6.1.4.1.186.1.19.2.3.21.32)
upsTrapUnresettableInverterOverload (1.3.6.1.4.1.186.1.19.2.3.21.33)
upsTrapUnresettableInverterOverloadClear (1.3.6.1.4.1.186.1.19.2.3.21.34)
upsTrapInputOverVoltage (1.3.6.1.4.1.186.1.19.2.3.21.35)
upsTrapInputOverVoltageClear (1.3.6.1.4.1.186.1.19.2.3.21.36)
upsTrapInputUnderVoltage (1.3.6.1.4.1.186.1.19.2.3.21.37)
upsTrapInputUnderVoltageClear (1.3.6.1.4.1.186.1.19.2.3.21.38)
upsTrapInputFrequencyError (1.3.6.1.4.1.186.1.19.2.3.21.39)
upsTrapInputFrequencyErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.40)
upsTrapBypassOverVoltage (1.3.6.1.4.1.186.1.19.2.3.21.41)
upsTrapBypassOverVoltageClear (1.3.6.1.4.1.186.1.19.2.3.21.42)
upsTrapBypassUnderVoltage (1.3.6.1.4.1.186.1.19.2.3.21.43)
upsTrapBypassUnderVoltageClear (1.3.6.1.4.1.186.1.19.2.3.21.44)
upsTrapBypassFrequencyError (1.3.6.1.4.1.186.1.19.2.3.21.45)
upsTrapBypassFrequencyErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.46)
upsTrapDCUnderVoltAtTest (1.3.6.1.4.1.186.1.19.2.3.21.47)
upsTrapDCUnderVoltAtTestClear (1.3.6.1.4.1.186.1.19.2.3.21.48)
upsTrapBatteryLow (1.3.6.1.4.1.186.1.19.2.3.21.49)

upsTrapBatteryLowClear (1.3.6.1.4.1.186.1.19.2.3.21.50)
upsTrapBatteryAtShutdownlevel (1.3.6.1.4.1.186.1.19.2.3.21.51)
upsTrapBatteryAtShutdownlevelClear (1.3.6.1.4.1.186.1.19.2.3.21.52)
upsTrapReplaceBattery (1.3.6.1.4.1.186.1.19.2.3.21.53)
upsTrapReplaceBatteryClear (1.3.6.1.4.1.186.1.19.2.3.21.54)
upsTrapChargerOverVoltageWarning (1.3.6.1.4.1.186.1.19.2.3.21.55)
upsTrapChargerOverVoltageWarningClear (1.3.6.1.4.1.186.1.19.2.3.21.56)
upsTrapBatteryTestFailed (1.3.6.1.4.1.186.1.19.2.3.21.57)
upsTrapBatteryTestFailedClear (1.3.6.1.4.1.186.1.19.2.3.21.58)
upsTrapBatteryDepleted (1.3.6.1.4.1.186.1.19.2.3.21.59)
upsTrapBatteryDepletedClear (1.3.6.1.4.1.186.1.19.2.3.21.60)
upsTrapBatteryOverheat (1.3.6.1.4.1.186.1.19.2.3.21.61)
upsTrapBatteryOverheatClear (1.3.6.1.4.1.186.1.19.2.3.21.62)
upsTrapSystemOverheat (1.3.6.1.4.1.186.1.19.2.3.21.63)
upsTrapSystemOverheatClear (1.3.6.1.4.1.186.1.19.2.3.21.64)
upsTrapOutputOverloadWarning (1.3.6.1.4.1.186.1.19.2.3.21.65)
upsTrapOutputOverloadWarningClear (1.3.6.1.4.1.186.1.19.2.3.21.66)
upsTrapCurrentLimitWarning (1.3.6.1.4.1.186.1.19.2.3.21.67)
upsTrapCurrentLimitWarningClear (1.3.6.1.4.1.186.1.19.2.3.21.68)
upsTrapAsyncOperation (1.3.6.1.4.1.186.1.19.2.3.21.69)
upsTrapAsyncOperationClear (1.3.6.1.4.1.186.1.19.2.3.21.70)
upsTrapServiceUPS (1.3.6.1.4.1.186.1.19.2.3.21.71)
upsTrapServiceUPSClear (1.3.6.1.4.1.186.1.19.2.3.21.72)
upsTrapBatteryNearExpiration (1.3.6.1.4.1.186.1.19.2.3.21.73)
upsTrapBatteryNearExpirationClear (1.3.6.1.4.1.186.1.19.2.3.21.74)
upsTrapBatteryExpired (1.3.6.1.4.1.186.1.19.2.3.21.75)
upsTrapBatteryExpiredClear (1.3.6.1.4.1.186.1.19.2.3.21.76)
upsTrapDisplayCableError (1.3.6.1.4.1.186.1.19.2.3.21.77)
upsTrapDisplayCableErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.78)
upsTrapRemotEyeCommError (1.3.6.1.4.1.186.1.19.2.3.21.79)
upsTrapRemotEyeCommErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.80)
upsTrapRemotEyeUplinkCommError (1.3.6.1.4.1.186.1.19.2.3.21.81)
upsTrapRemotEyeUplinkCommErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.82)
upsTrapServicePortCommError (1.3.6.1.4.1.186.1.19.2.3.21.83)
upsTrapServicePortCommErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.84)
upsTrapDispCommError (1.3.6.1.4.1.186.1.19.2.3.21.85)
upsTrapDispCommErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.86)
upsTrapSystemTestFailed (1.3.6.1.4.1.186.1.19.2.3.21.87)
upsTrapSystemTestFailedClear (1.3.6.1.4.1.186.1.19.2.3.21.88)

upsTrapBypassOn (1.3.6.1.4.1.186.1.19.2.3.21.89)
upsTrapBypassOnClear (1.3.6.1.4.1.186.1.19.2.3.21.90)
upsTrapPowerFailure (1.3.6.1.4.1.186.1.19.2.3.21.91)
upsTrapPowerFailureClear (1.3.6.1.4.1.186.1.19.2.3.21.92)
upsTrapShutdownPending (1.3.6.1.4.1.186.1.19.2.3.21.93)
upsTrapShutdownPendingClear (1.3.6.1.4.1.186.1.19.2.3.21.94)
upsTrapOutputOffAsRequested (1.3.6.1.4.1.186.1.19.2.3.21.95)
upsTrapOutputOffAsRequestedClear (1.3.6.1.4.1.186.1.19.2.3.21.96)
upsTrapOutputOff (1.3.6.1.4.1.186.1.19.2.3.21.97)
upsTrapOutputOffClear (1.3.6.1.4.1.186.1.19.2.3.21.98)
upsTrapBatteryTestInProgress (1.3.6.1.4.1.186.1.19.2.3.21.99)
upsTrapBatteryTestInProgressClear (1.3.6.1.4.1.186.1.19.2.3.21.100)
upsTrapBatteryOn (1.3.6.1.4.1.186.1.19.2.3.21.101)
upsTrapBatteryOnClear (1.3.6.1.4.1.186.1.19.2.3.21.102)
upsTrapEMDSensor1AlarmTriggered (1.3.6.1.4.1.186.1.19.2.3.21.103)
upsTrapEMDSensor1AlarmTriggeredClear (1.3.6.1.4.1.186.1.19.2.3.21.104)
upsTrapEMDSensor2AlarmTriggered (1.3.6.1.4.1.186.1.19.2.3.21.105)
upsTrapEMDSensor2AlarmTriggeredClear (1.3.6.1.4.1.186.1.19.2.3.21.106)
upsTrapEMDHumidityAtLowCriticalPoint (1.3.6.1.4.1.186.1.19.2.3.21.107)
upsTrapEMDHumidityAtLowCriticalPointClear (1.3.6.1.4.1.186.1.19.2.3.21.108)
upsTrapEMDHumidityAtHighCriticalPoint (1.3.6.1.4.1.186.1.19.2.3.21.109)
upsTrapEMDHumidityAtHighCriticalPointClear (1.3.6.1.4.1.186.1.19.2.3.21.110)
upsTrapEMDHumidityAtLowWarningPoint (1.3.6.1.4.1.186.1.19.2.3.21.111)
upsTrapEMDHumidityAtLowWarningPointClear (1.3.6.1.4.1.186.1.19.2.3.21.112)
upsTrapEMDHumidityAtHighWarningPoint (1.3.6.1.4.1.186.1.19.2.3.21.113)
upsTrapEMDHumidityAtHighWarningPointClear (1.3.6.1.4.1.186.1.19.2.3.21.114)
upsTrapEMDTemperatureAtLowCriticalPoint (1.3.6.1.4.1.186.1.19.2.3.21.115)
upsTrapEMDTemperatureAtLowCriticalPointClear (1.3.6.1.4.1.186.1.19.2.3.21.116)
upsTrapEMDTemperatureAtHighCriticalPoint (1.3.6.1.4.1.186.1.19.2.3.21.117)
upsTrapEMDTemperatureAtHighCriticalPointClear (1.3.6.1.4.1.186.1.19.2.3.21.118)
upsTrapEMDTemperatureAtLowWarningPoint (1.3.6.1.4.1.186.1.19.2.3.21.119)
upsTrapEMDTemperatureAtLowWarningPointClear (1.3.6.1.4.1.186.1.19.2.3.21.120)
upsTrapEMDTemperatureAtHighWarningPoint (1.3.6.1.4.1.186.1.19.2.3.21.121)
upsTrapEMDTemperatureAtHighWarningPointClear (1.3.6.1.4.1.186.1.19.2.3.21.122)
upsTrapLoginError (1.3.6.1.4.1.186.1.19.2.3.21.123)
upsTrapLoginErrorClear (1.3.6.1.4.1.186.1.19.2.3.21.124)

Toshiba RemotEye Application Program

Toshiba RemotEye Client Software

The Toshiba RemotEye Client Software runs on servers and connects to a designated RemotEye. When the servers start up the RemotEye scans for the UPS status. When UPS power events are detected, the RemotEye broadcasts a Shutdown command to the workstation. The Toshiba RemotEye Client Software will broadcast warning messages (on the screen of the servers) and then shutdown the server gracefully.

Installation of RemotEye III Client using Windows 9x/2000/NT/XP/2008/Vista

Insert the RemotEye CD-ROM into the CD-ROM drive.

Run the Installer.exe program (on the CD-ROM).

A dialog box will be displayed on the screen, type in the IP address of the designated RemotEye, its Client Name, and its Shutdown Delay Time. Click the Def. button to enter the workstation's name as the Client Name setting (see Figure 19:).

Upon completion of the setup screen's entries, click OK and the RemotEye service will connect to the RemotEye automatically.

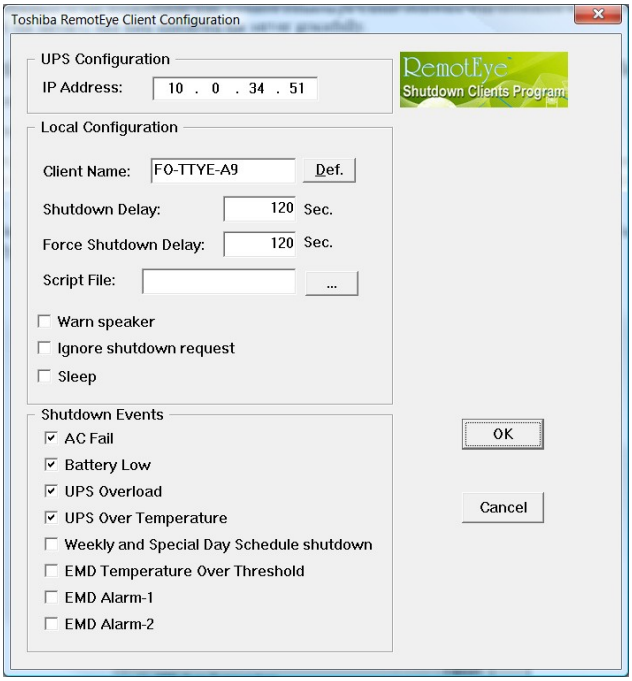


Figure 19: Toshiba RemotEye Client Software

UPS Configuration

IP Address: Input SNMP/Web Card IP address.

Local Configuration

Client Name: Default - Capture computer name
Shutdown Delay: Countdown 120 seconds after warning period time over.
Force Shutdown Delay: Run script for 120 seconds
Script File: After Shutdown delay time, user wants to execute script (e.g. close database.)
Warn Speaker: Beep sounds if selected
Ignore Shutdown Request: Ignore shutdown request if selected
Sleep: System will enter Sleep mode. (User must first enable hibernation of O.S.)

View the Connected Client via HTTP

Run the Web Browser on any machine.

Browse the RemotEye IP address.

For example, browse http://172.18.1.63

Select Connected Client Table from UPS Monitoring of the main menu and the list of the connected devices will be shown on the screen Figure 20: HTTP Connected Client Table

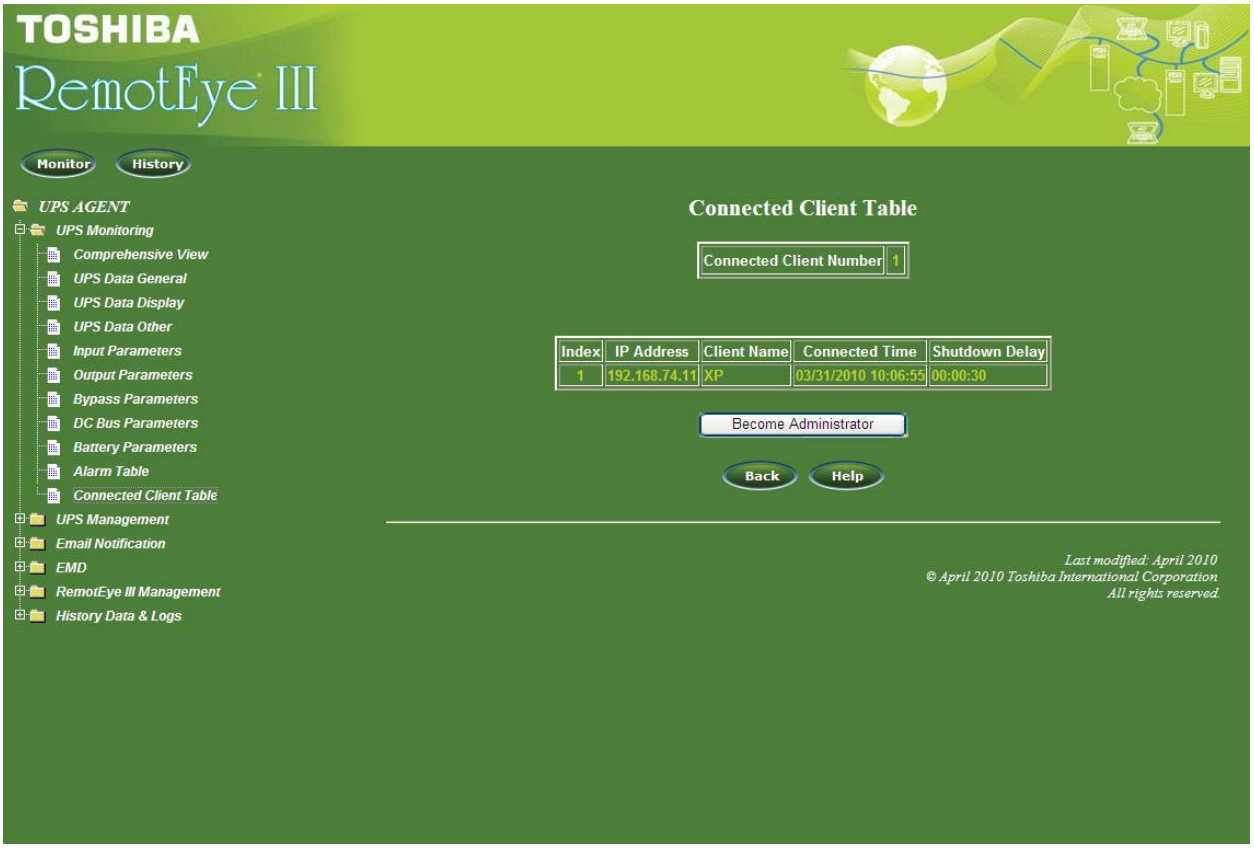


Figure 20: HTTP Connected Client Table

Note: The client local shutdown delay must not be greater than the UPS shutdown delay configured in RemotEye .

Shutdown Process in Windows 9x/NT/2000/XP/2008/Vista

When RemotEye detects a power event, for example, AC power failure, the RemotEye will send the shutdown command to its connected clients. The clients will post a dialog box to notify the user that the system will be shutdown. Only checked events in the RemotEye III Client Configuration - Shutdown Events box will trigger a pop-up message and shutdown the Client. See the flow chart below for a graphical view of the interactions of the shutdown delays.

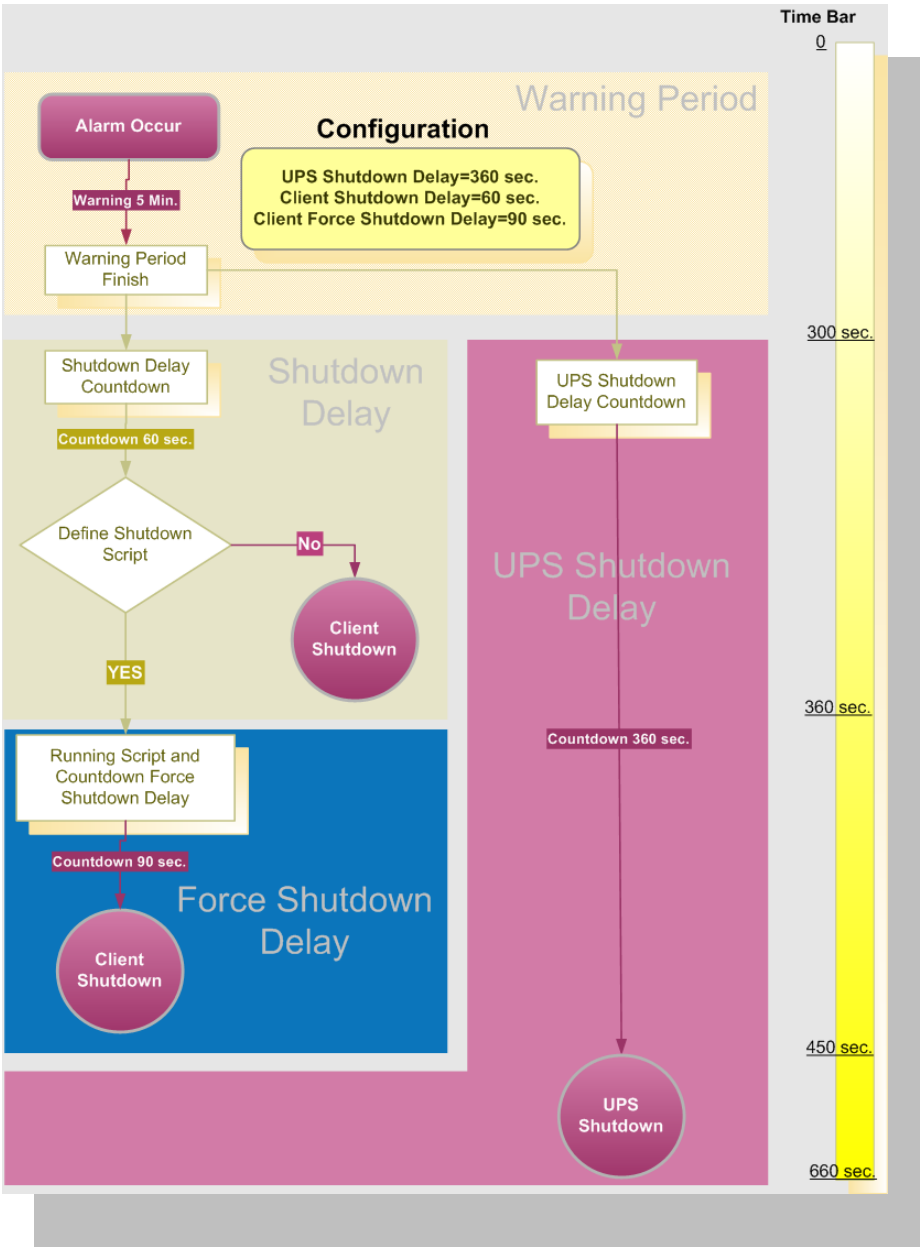


Figure 21: Toshiba RemotEye Client Software

The user can select "Shutdown Now" to start the shutdown process or "Cancel" to cancel the shutdown process. Toshiba RemotEye Client Software will proceed with the shutdown process and the host or server will be shutdown automatically if nothing is selected after the counter has counted down to zero.

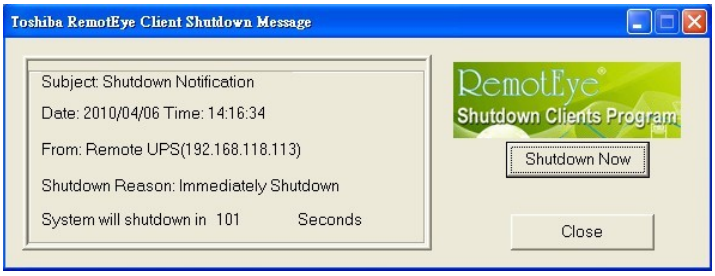


Figure 22: Toshiba RemotEye Client Software Shutdown Warning Message

There are five kinds of state for Toshiba RemotEye Client Software.

UPS Connection OK. (Green Background)

Trying to locate UPS. (Blue Background)

Local machine is about to shut down. (Red Background)

The service is suspended. (Green Background)

Remote UPS is about to shut down or has shut down. (Grey Background)

Uninstalling Toshiba Remoteye III Client Software

To uninstall the Toshiba RemotEye Client Software, the following procedure should be followed.

1. Right mouse click the “battery” icon in the taskbar and select "Exit” to stop the shutdown service.
2. Select the "Add/Remove programs" icon from the Control Panel.
3. Select the "RemotEye Service", and then click the "Add/ Remove" icon to remove the software.

Installation of RemotEye Client using UNIX

Introduction

RSH is a software daemon which is able to get/set specific command from/into RemotEye. The major intention of this software is to shutdown the local machine before the UPS runs out of power. This program is composed by shell scripts, written in bash, and virtually portable under any UNIX operating system. The program consists of three phases: the installation phase, the execution phase, and the configuration phase.

- The installation phase will help the user setup the program properly by asking a few questions.
- The execution phase will keep track of the status of a UPS via RemotEye.
- The configuration phase will guide user to reconfigure the setting that is made in installation phase.

Program Overview

When installing this program, the shutdown shell application will check the target machine's Operating System (OS) and determine whether it is a predefined OS from the recognized OS list. If it is not, the user will be prompted to answer some questions regarding system information (such as cmd name, path, etc). During the configuration phase, the program will ask user for information regarding the RemotEye (such as its IP address, name, etc). The reconfiguration phase allows the user to change the settings for later use. After installation, users can execute the program immediately or during the next system reboot.

Supported Operating System

1. Red Hat Advance Server release 2.1 AS
2. Sun Solaris 8 (x86)
3. Sun Solaris 8 (SPARC)
4. HP-UX (PA-RISC)

Installation

During the installation phase, the following steps are taken to help users install this program:

The program will automatically detect the target machine's OS and OS's distribution. User needs to select the correct item by entering the item number:

1. Please choose your OS:
2. Please choose your OS_Name:

If the target system is NOT on the predefined OS-list, the user will be prompted the following questions (questions 3~8)

3. "/dev" is your system device directory: [y/n]

- If "n" is selected,

4. Input device directory:

- Using "rsh" for remote shell:[y/n]
- If "n" is selected,

5. Input remote shell:

- Using "/sbin/init0" to shut down your system:[y/n]
- If "n" is selected,

6. Input shut down command:

- Please input your system's initial directory at boot time:
- Please input run level's directory to boot into:
- Do you have other run levels that need input?[y/n]
- If "n" is selected,

7. Please input run level directory:

- Install to folder /etc[y/n]
- If "n" is selected,

8. Input install folder:

- Do you want to start the daemon now?[y/n]

Execution

After successful installation of the program, users can use the uGuard.sh script to perform the following action.

Usage: ./uGuard.sh -[h][v][s][S][u][U][d][l][e][g] where

h: This manual page.

v: Show revision information.

s: Start the program now.

S: Start the program at next boot up time.

u: Unload program.

U: Unload program, don't restart at next boot time.

d: Suspend program.

l: List configurations.

e: Modify configurations.

g: See log [/var/log/usha/ug_usha.log].

Configuration

In this phase, users are able to change the parameters for the program. Users can change the setting to fit their needs at any time by executing "uGuard.sh –e". After the first configuration process, this phase will show the last setting value as a default setting.

Input USHA IP Address:

Input Client Name:

Warning Beep On? [y/n]

Shutdown delay time is 120 seconds?[y/n]

If "n" is selected,

Input shut down delay time:

Shut down script is loaded?[y/n]

If "n" is selected,

Input shut down script:

Force shut down delay time is 120 seconds?[y/n]

If "n" is selected,

Input force shut down delay time:

Shut Down Enable?[y/n]

Toshiba UPS Power Management

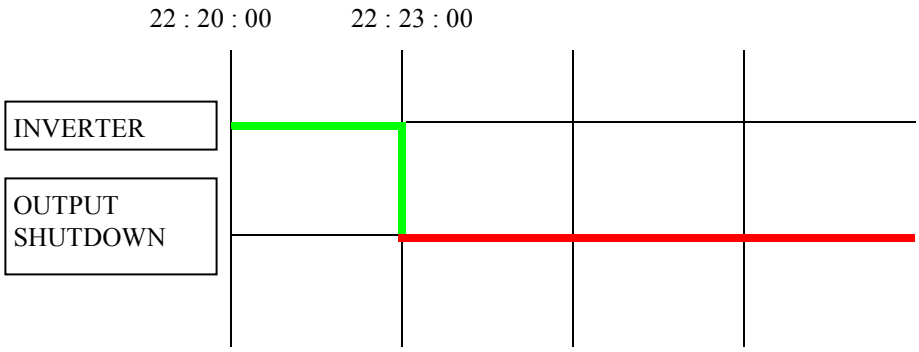
RemotEye III can help further protect critical load systems connected to a UPS by initiating automated shutdowns on that equipment. RemotEye III can shutdown servers upon detection of three UPS events; Input power failure, low battery, and overload. Also, RemotEye III can be used to coordinate automatic system shutdowns during weekends or holidays. This section highlights the manners in which RemotEye III can be used in conjunction with a UPS to manage power to UPS loads.

Set UPS to Output Shutdown Mode After Delay

Administrators can issue an output shutdown to Toshiba UPS via RemotEye III in any cases. To issue an output shutdown command, go to UPS Control in the UPS Management menu. Login as an administrator. Select the radio button beside Set UPS to Output Shutdown Mode After Delay and click the Apply button.

Scenario:

UPS Output Shutdown Delay (sec):	180(default)
Set UPS to Output Shutdown Mode After Delay:	22:20:00



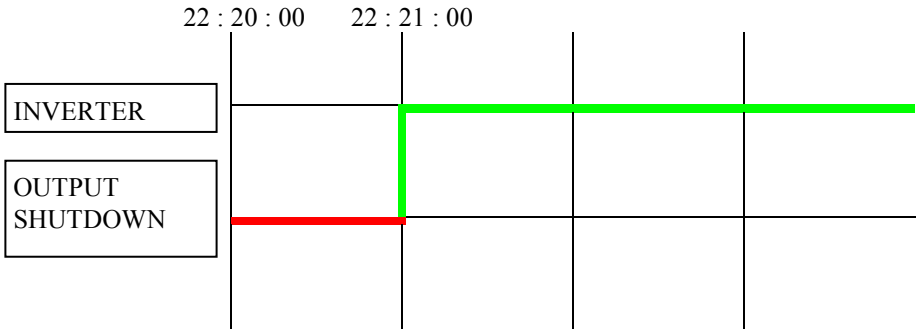
Set UPS to Run (Inverter) Mode After Delay

When there is a need to set the UPS to run (inverter) mode immediately, go to UPS Control on page 56 in the UPS Management menu. Then, login as an administrator and select the radio button beside Set UPS to Run (Inverter) Mode After Delay. Lastly , click the Apply button.

Scenario:

UPS Run (Inverter) Mode Delay (mins): 1 min(default)

Set UPS to Run (Inverter) Mode After Delay: 22:20:00



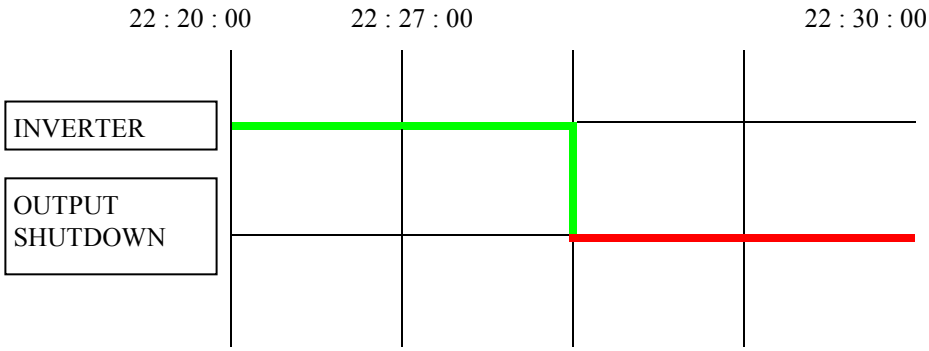
UPS Shutdown Events

RemotEye III can initiate output shutdown upon the occurrence of six different UPS events, Input Power Failure, Low Battery, UPS Overload, UPS Over Temperature, Recurring Schedule and Non-recurring Schedule. Users can view the current setting of these events on

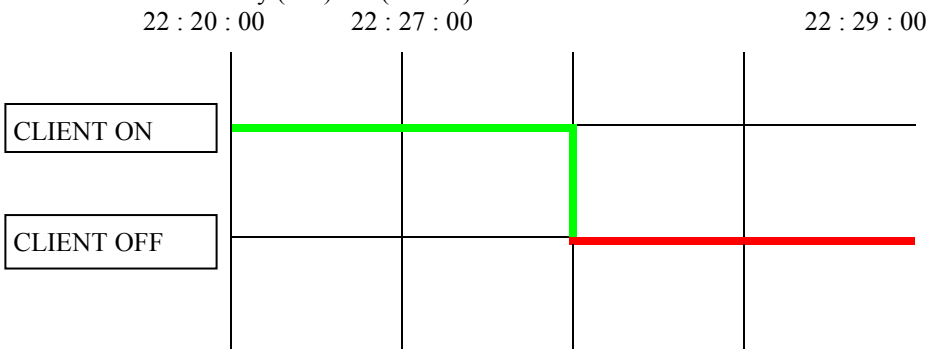
UPS Shutdown Events page in UPS Management menu. To alter these settings, log in as an administrator, and configure the UPS shutdown events action and delay times accordingly. Click the Set Value button when finish. (See Pg. 59 for details)

Scenario:

Shutdown Event:	AC Failed
Status:	Client Shutdown
Delay (Min):	7 (default)
Warning Interval (sec):	30 (default)
UPS Output Shutdown Delay (Sec) 180(default)	
UPS Events - AC failed	22:20:00



Client's local shutdown delay (Sec):120(default)



Managing the UPS Recurring & Non-recurring Schedule

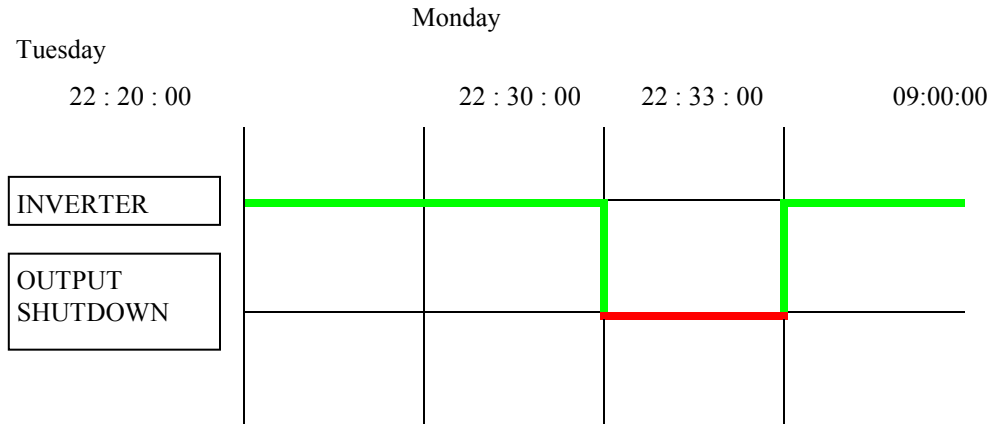
RemotEye III supports two output shutdown schedule – (1) Recurring Schedule; (2) Non-recurring Schedule.

Note: Before managing the UPS Shutdown Schedule, please make sure that the Date and Time configured in RemotEye III is correct.

Scenario

Shutdown Event:	Recurring Schedule
Status:	UPS Output shutdown
Delay (Min):	10(default)
Warning Interval (sec):	60(default)
UPS Shutdown Delay (Sec):	180(default)
Shutdown & Restart day & time:	Monday 22:20:00 ----- 99:99:99
Shutdown & Restart day & time:	Tuesday 99:99:99 ----- 09:00:00

Note: 99:99:99 indicates the RemotEye III will ignore the Restart Time on Monday, and the Shutdown time on Tuesday.



Multi-Machine Configuration (MMC)

The Multi-Machine Configuration (MMC) software configures and operates the Toshiba RemotEye III Client software for multiple machines. In order to run this software, the RemotEye III Client software must first be installed.

Installation of MMC Software

1. The software for the Multi-Machine Configuration can be located at www.toshibaups.com and clicking on the following paths: RemotEye III-> Download RemotEye Files-> Multiple Configuration
2. Download the software and run the MMC_install.exe program.
3. Once installation is complete, click on MMC.exe to open the program and a window should be displayed like the one shown below.
4.

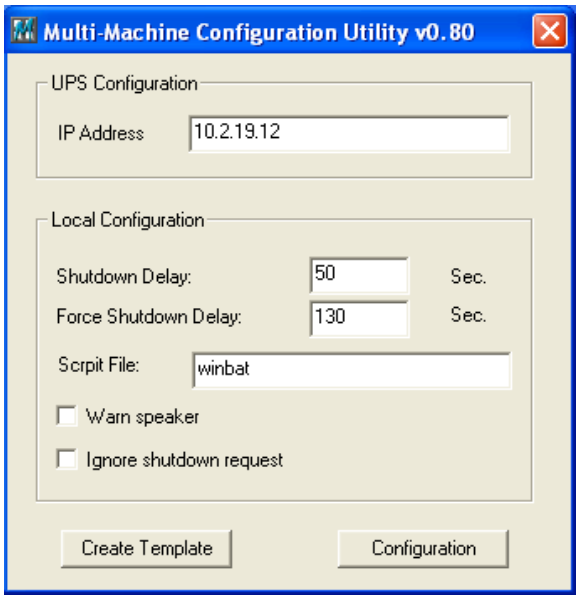


Figure 23: MMC window

Configuration Groups

The Multi-Machine Configuration Utility window shown in Figure 8 contains two configuration groups: UPS Configuration and Local Configuration. These configurations adjust the settings in the RemotEye III Client software.

UPS Configuration
IP Address – allows the user to change the IP Address of the RemotEye III client

Local Configuration
Shutdown Delay – The amount of time after the AC power has been interrupted for proper shutdown of the client side.

Force Shutdown Delay – Amount of time to properly shutdown the computer using the Script File after proper shutdown of the Client.

Script File – File used for proper shutdown of the system.

Warn Speaker – produces a tone along with a warning message to indicate that an error has occurred. The tone will only be produce if the box is checked; otherwise it will display only the warning message.

Ignore shutdown request – Request to shutdown the system. If the box is checked, then the systems will NOT shutdown the system. Otherwise, it will execute shutdown.

Function Button Description

Create Template
Selecting the Create Template button will create a template file according to the configurations of UPS Configuration and Local Configuration. This file should be named as template.ini.

Configuration
Select the Configuration button on the local machine side and the application will begin searching for the location of the file upsconfig.ini. This file is created when the Multi-Machine Configuration is installed on the computer. Once the file is located, it will modify the associated configurations according to template.ini.

Auto Save-Log Software

Save-Log is utility software which is able to save logs from several RemotEye(s) at the same time. It also has the capability to save logs periodically. These logs are useful in identifying problems with the RemotEye. There are four different types of logs, each with their own functionality. They are UPS History Log, UPS Extended Log, UPS Events Log, and RemotEye Events Log. Information on these types of logs are found in pages 73-77.

Installation of Save-Log

1. The software for the Auto Save log can be located at www.toshiba.com/ind and clicking on the following paths: RemotEye III-> Download RemotEye Files-> Save Log
2. Download the software and run the Savelog_install.exe program.

Basic Layout

When you first enter the Save Log Utility software, it will display a window like the one shown below. This window includes two group boxes. One is the "Log Type" group, and the other is the "RemotEye List." In addition to the group boxes, it also includes seven function buttons which is disabled by default with the exception of the Add and Discover button.

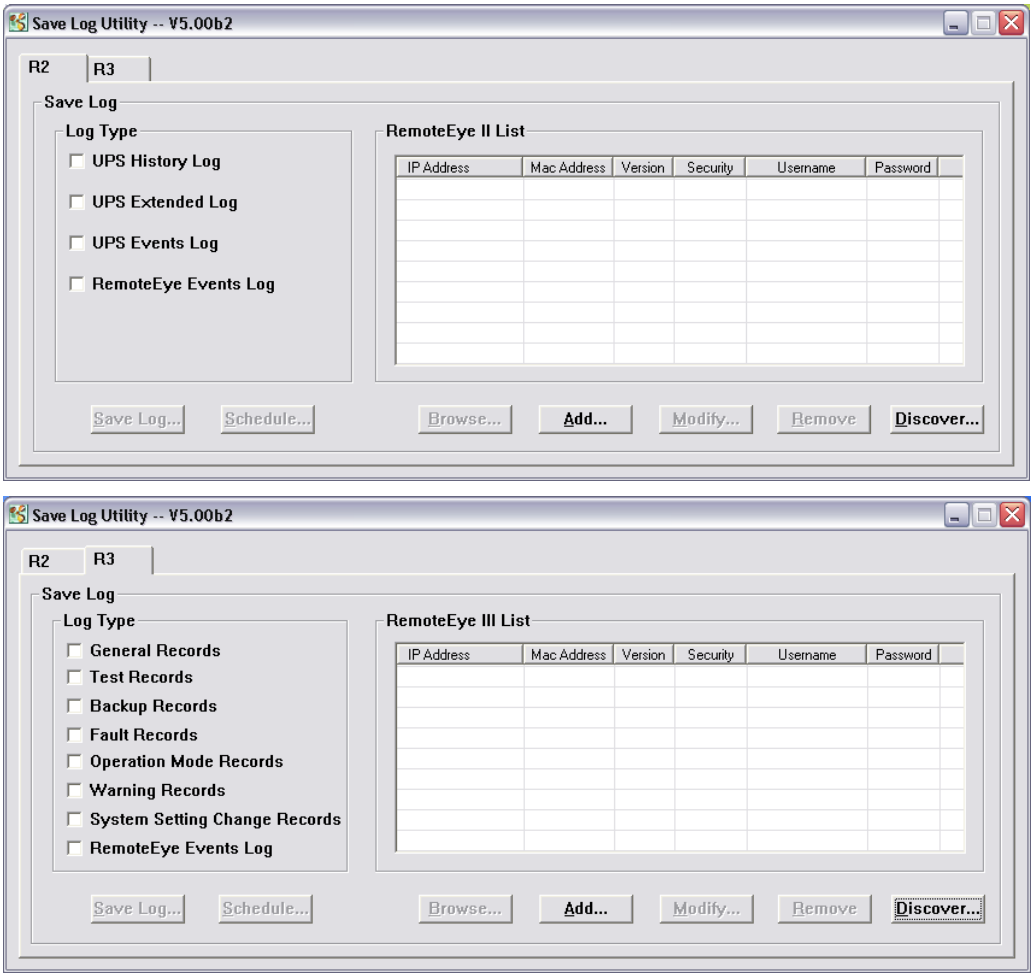


Figure 24 Save Log Utility window

Log Type Group

This group contains four check boxes which allow the user to select the log(s) to be saved. The default value of the Log Type is unchecked. The files should be saved in the directory which the user selected, and the software will create a saved file which should be named according to the following guidelines.

General Records → — Current Time Stamp_PageLogData.csv

Test Records → — Current Time Stamp_PageTestLogData.csv

Backup Records → — Current Time Stamp_PageBackupLogData.csv

Fault Records → — Current Time Stamp_PageFaultLogData.csv

Operation Mode Records → — Current Time Stamp_PageOmLogData.csv

Warning Records → — Current Time Stamp_PageWarningLogData.csv

System Setting Change Records→ — Current Time Stamp_PageSscLogData.csv

RemotEye III Events Log → — Current Time Stamp_PageLogAgent.csv

For Example,

General Records → — 20050214_1900_PageLogData.csv

Test Records → — 20050214_1900_PageTestLogDatacsv

Backup Records → 20050214_1900__PageBackupLogData.csv

Fault Records → — 20050214_1900_PageFaultLogData.csv

Operation Mode Records → — 20050214_1900_PageOmLogData.csv

Warning Records → — 20050214_1900__PageWarningLogData.csv

System Setting Change Records→ — 20050214_1900__ PageSscLogData.csv

RemotEye III Events Log → 20050214_1900__PageLogAgent.csv

RemotEye List Group

This contains the information of the RemotEye(s), and it also allows the user to select multiple RemotEye(s) on the list. The default mode for the “RemotEye List” is an empty list, but when you click on the Add or Discover button an icon is displayed along with the information of the RemotEye such as the one shown below. Once the information is displayed, the user can select which IP address they want to keep track of. Notice that the buttons are now enabled. The Save Log and Schedule button will be enabled when both the item(s) in Log Type and the RemotEye List is selected. These buttons along with the other five will be explained more in detail in the next section.

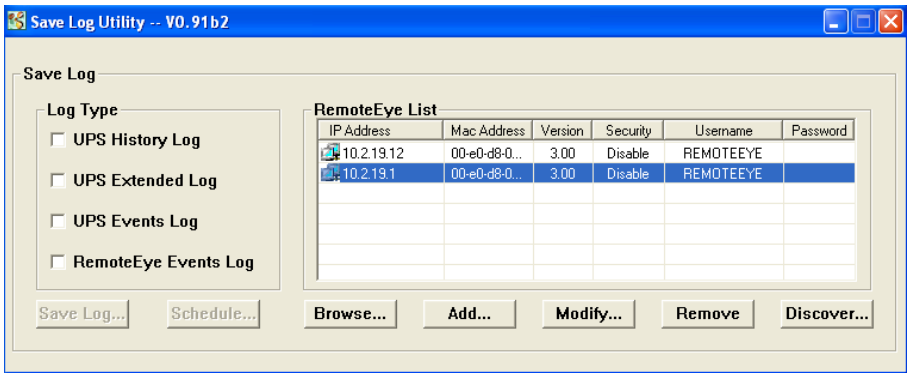


Figure 25: Save Log Utility window with RemotEye data

Function Button Description

Save Log

This function allows the user to save the log manually. This button will be enabled if both the item(s) in Log Type and RemotEye List are selected. Otherwise, it is disabled.

Schedule

This function allows the user to save the log periodically. The user is allowed to set up to 4 schedules. Similar to the save button, this button is enabled if both the item(s) in Log Type and RemotEye List are selected. Otherwise, it is disabled. When the Daily Schedule setting is Enabled, it will automatically save the log of selected item(s) according to the schedule specified by the user. The left hand side of the Schedule List is the time, in hours, that you want the log to save in. It can range from 00 to 23 where 00 is midnight. If it displays "--", it means that the specific scheduled has been disabled. The right hand side is the time period, in minutes, in which to save the log. The time period for each schedule list is in multiple of 15 minutes.

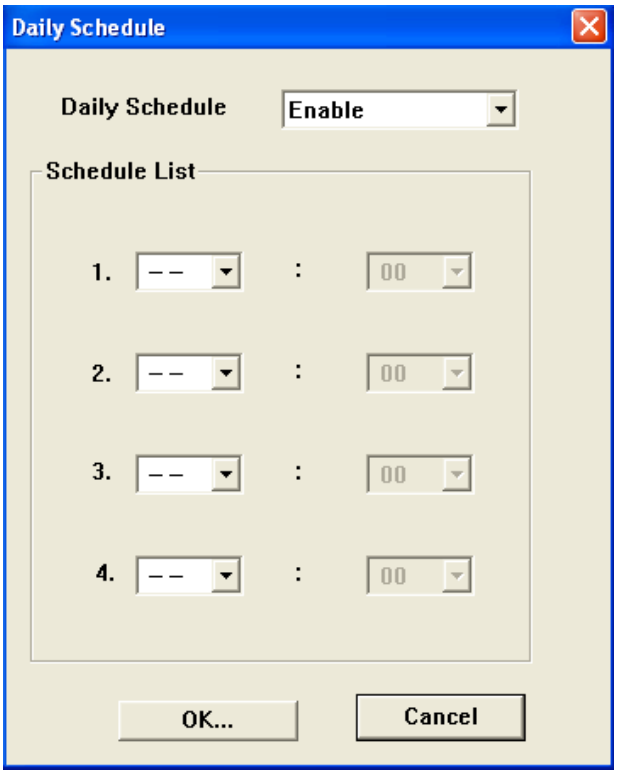


Figure 26: Scheduling logs

Browse
This function will open the Internet Explorer and browse the web page of the selected item on the RemotEye List. If more than one item is selected on the list, it will just open one Internet Explorer at a time. This button is disabled if there is no item(s) selected on the RemotEye List. Otherwise, it is enabled.

Add
This function allows the user to manually add an item into the RemotEye List provided they have the Username and Password. Click OK to add the item or press Cancel to exit this mode. This button is always enabled.

Modify
This function allows the user to modify the value of "Username" and "Password" item. This button is disabled if there is no item(s) selected on the RemotEye List. Otherwise, it is enabled.

Remove
This function allows the user to remove the selected item(s) from the RemotEye List. This button is disabled if there is no item(s) selected on the RemotEye List. Otherwise, it is enabled.

Discover
This button will automatically detect the RemotEye(s) from the network and add them to the RemotEye List. During the discovering period, a message window is displayed to let the user know the Discover button is still in progress. This button is always enabled.

Upgrade RemotEye III

General information

To be able to perform firmware upgrading, RemotEye III must be connected to the same network as the workstation from which the upgrade file is to be sent. In the RemotEye III make sure the TFTP Upgrade Control is enabled and that users have the login string information and the Community Read/Write Password.

Hardware Setup

RemotEye III upgrade is accomplished through a network link. Follow these steps to setup the hardware for RemotEye III upgrade:

Verify network cable connection to NETWORK port of RemotEye III.

Verify active link to LAN or Network.

For further information on the network connection, refer Making the Network Connection on page 18

Tupgrade Menu Navigation

UPS List: Displays the addresses of the RemotEye III present in the local network.

Discover: Search for the RemotEye III on the local network.

Add: Lets you add the IP address of a RemotEye III to the UPS List manually.

Modify: Lets you modify the parameters of the RemotEye III selected in the UPS List.

Upgrade: Sends the program loaded with the Open button to the selected RemotEye III of the UPS List.

Open: Open and load the new image file for upgrade.

Remove: Remove the selected RemotEye III from the UPS List.

Quit: Exit the program.

Note: You can simultaneously upgrade up to 6 RemotEye III on the network using the Tupgrade.exe program

Upgrading RemotEye III Firmware from Windows via Network

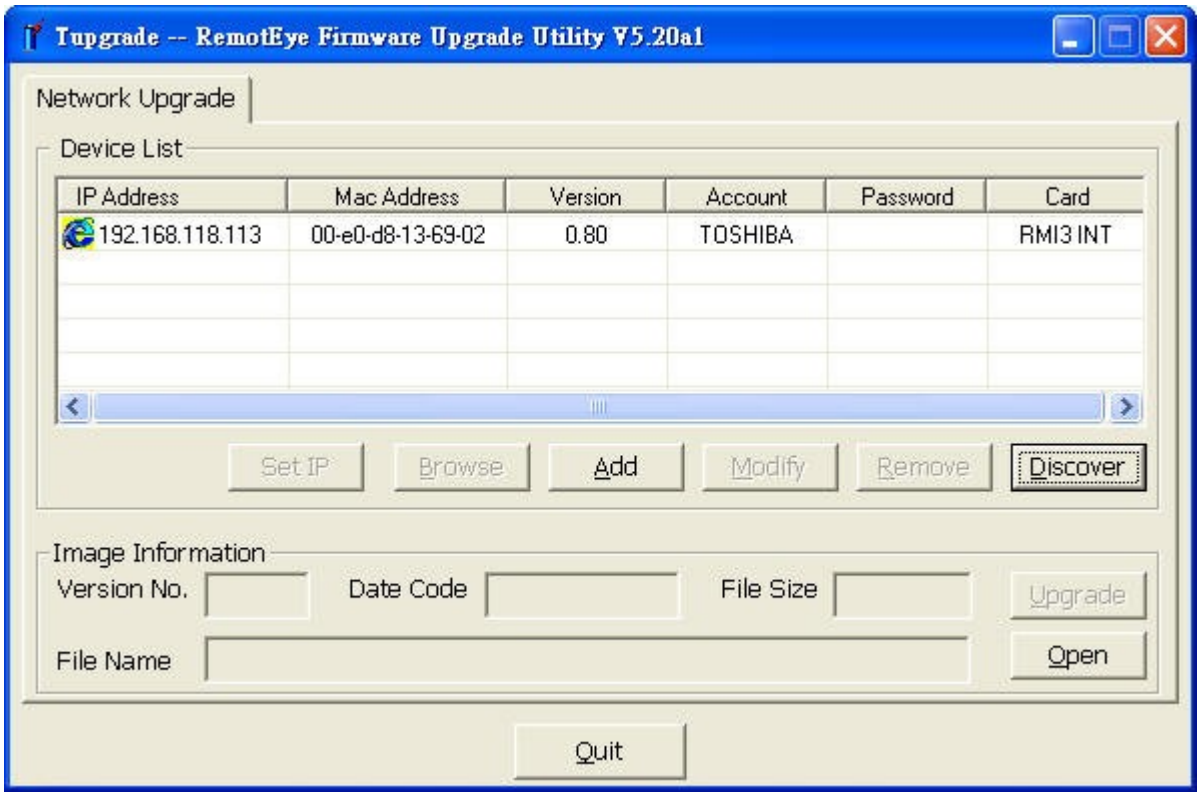


Figure 27: Tupgrade, RemotEye III Upgrade Utility via Network

The RemotEye III firmware may be upgraded from a Windows platform by performing the following procedure.

A PC with a Windows 95/98/2000/NT/XP/Vista operating system installed will be required for this procedure.

On the PC, create a directory named Upgrade and copy the contents of the RemotEye III Upgrade CD-ROM to the Upgrade directory.

For network upgrade, ensure that DIP switches 1 and 2 of the RemotEye III are off.

From the Control Group menu, set the TFTP Upgrade Control to Enabled.

From the Upgrade directory, run Tupgrade.exe and a dialog box will be displayed.

Click Discover to search for the RemotEye III on the network.

Select the RemotEye III to be upgraded and enter the password.

Click Open to load the upgrade file.

Path to the upgrade file and select the latest version.

Click Upgrade to transfer the file to the upgradeable read-only memory of the RemotEye III.

When the transfer is complete the RemotEye III will reboot.

Upgrading RemotEye III Firmware from Windows via Serial

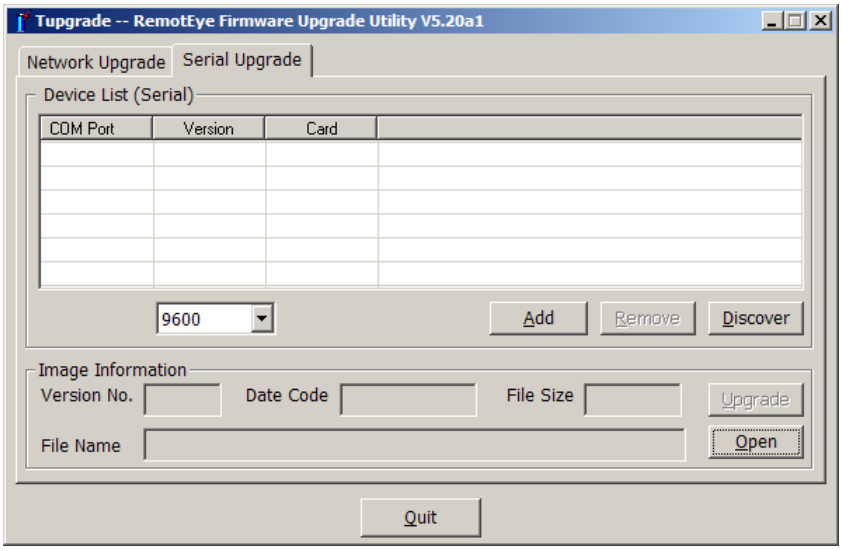


Figure 28: Tupgrade, RemotEye III Upgrade Utility via Serial

The RemotEye III firmware may be upgraded from a Windows platform by performing the following procedure.

A PC with a Windows 95/98/2000/NT/XP/Vista operating system installed will be required for this procedure.

On the PC, create a directory named Upgrade and copy the contents of the RemotEye III Upgrade CD-ROM to the Upgrade directory.

From the Control Group menu, set the TFTP Upgrade Control to Enabled.

For serial upgrade, ensure that DIP switch 1 is on, DIP switch 2 is off.

From the command prompt (where Tupgrade is saved to), type Tupgrade -S and a dialog box will be displayed.

Click Discover to search for the RemotEye III on the network.

Select the RemotEye III to be upgraded and enter the password.

Click Open to load the upgrade file.

Path to the upgrade file and select the latest version.

Click Upgrade to transfer the file to the upgradeable read-only memory of the RemotEye III.

When the transfer is complete the RemotEye III will reboot.

Upgrading RemotEye III Firmware from UNIX

The RemotEye III firmware may be upgraded from a Unix platform by performing the procedure below. To upgrade the firmware using a UNIX operating system, the tftp command must be installed on the system.

To upload the new firmware to the RemotEye III, execute the following command line:

```
# tftp

tftp> binary

tftp> connect <host>

tftp> put <filename> upgrade@<password>@<username>

where:

binary                                                  : Binary data download
mode.

<host>                                                  : RemotEye III IP
address.

Example: 172.168.1.18.

put                                                     : PUT command.

<filename>                                               : Name of the file
containing the firmware image.

Example: \TSB100.bin.

upgrade                                                 : Upgrade key word.

@                                                       : Character separator.

<password>                                              : Community Read/Write
string.

<username>                                              : HTTP login user name.
```

Hardware Specifications

RemotEye III Feature Summary

CPU	16-Bits AC1106 Fast Ethernet RISC Processor
Memory	2MB(1Mbit x16) TFBGA Flash ROM 2MB (1Mbit x16) SDRAM
Network	Support 10/100 Mbits RJ45 LAN Connector
Serial Communication	Two UART Channels, one RJ-45, one Gold finger.
Serial Connection	Console - RJ45 Connecter (FULL Function /RS-232 Level) UPS - Gold finger (TXD, RXD/RS-232 Level)
Jumper	Two bits for upgrade mode configure.
DIP Switch	Two bits for operating mode configure.
LED	Power x1 (Green) Status x1 (Yellow) LAN 10 Link/Activity x 1 (Yellow) LAN 100 Link/Activity x 1 (Green)
Reset Button	One Push Button
RTC	Real time clock

System Specification

Description	Specification
Power Input	+8V ~ +15VDC
Power Consumption	3.0 Watts Maximum +8V DC 1.56 Watts +15V DC 1.7 Watts
Temperature Operating	0∘C ~ +60∘C
Temperature Non-operating	-10∘ C ~ +70∘ C
Humidity Operating	10 ~ 80 %
Humidity Non-operating	5 ~ 95 %
Board dimension	65.8x 60 x 15.2 mm (LxWxH)
Weight	45 gm
Regulation	CE,FCC class B

Firmware Specifications

Network Protocols	SNMP over UDP/IP ,HTTP over TCP/IP ARP, RARP, DHCP, DNS, BOOTP, SMTP, SNTP, TFTP, SSL, SSH, PPP, ICMP
SNMP	RFC 1628, JEMA MIB, TOSHIBA MIB
UPS Protocol	TOSHIBA UPS protocol

LED Key

Front →

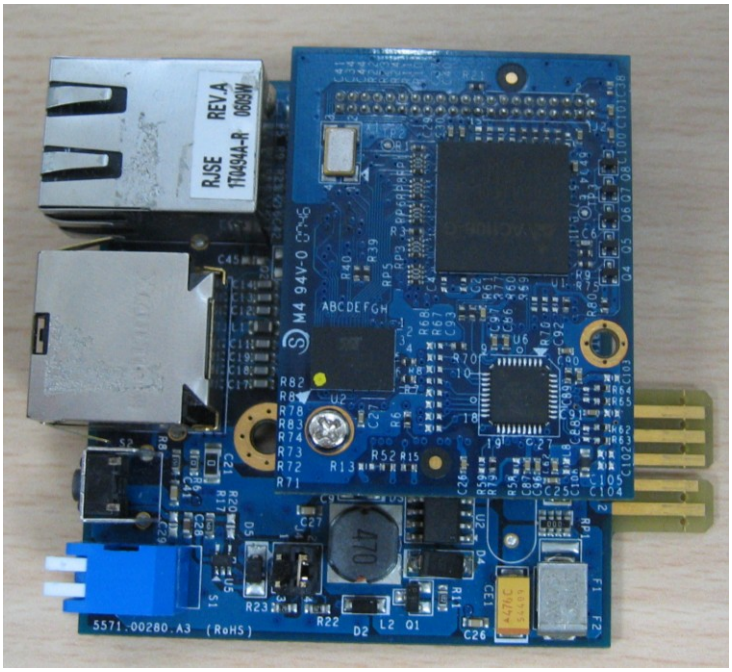


Figure 29: RemotEye III/Internal Top View

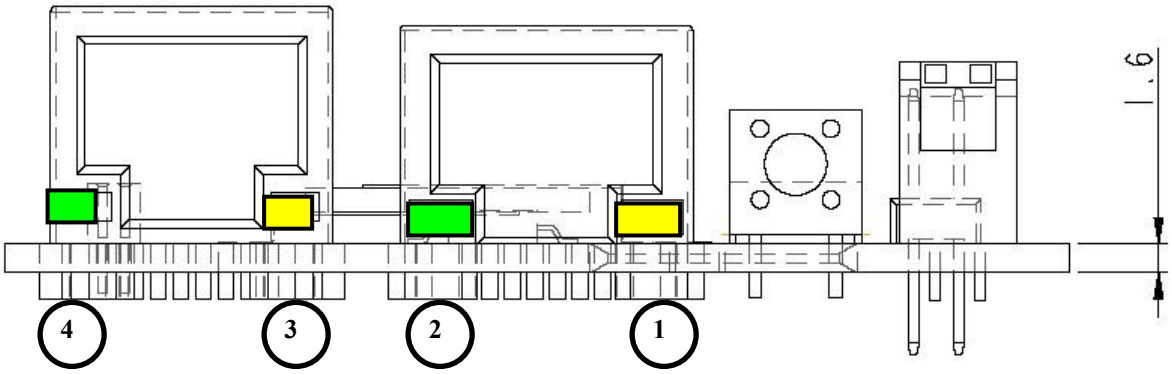


Figure 30: Front View – LED location

(1)	Status LED (Yellow) J2	(3)	LAN 10 Link/Activity LED (Yellow)
(2)	Power LED (Green)	(4)	J3 LAN 100 Link/Activity LED (Green)

Table 3. LED define list

Jumper Setting

J4 Jumper

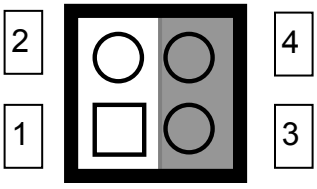
Pin1/2	Pin3/4	Function
1	1	Reserved
1	0	Clear Password
0	1	Reserved
0	0	Reserved
1: Jumper short ; 0 : Jumper open		

Table 4. J4 Jumper Setting Table

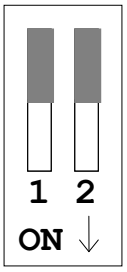
※ Example: Setup Serial Upgrade Z-modem Mode (S1 DIP Switch must Setup: S1-1 on, S1-2 off)

Pin1/2: Jumper open.

Pin3/4: Jumper short.



DIP Switch Setting



S1 DIP Switch

S1-1(PIN1/4)	S1-2(PIN2/3)	Function
ON	ON	Manufacturing Diagnostic Mode
OFF	ON	Debug Mode
ON	OFF	Serial Upgrade Mode
OFF	OFF	Operational Mode (Default)

Table 5. S1 DIP Switch Setting Table

LAN connector (J2)

Pin	Signals	Function
1	TX+ / TDP	OUTPUT +
2	TX- / TDN	OUTPUT -
3	RX+ / RDP	INPUT +
4	NC	NO CONNECT
5	NC	NO CONNECT
6	RX- / RXN	INPUT -
7	NC	NO CONNECT
8	NC	NO CONNECT

Table 6. RJ45 LAN connector pin descriptions

Console connector (J3)

Pin	Signals	Function
1	RTSPC#	Request To Send – RS232 level
2	DTRPC#	Data Terminal Ready – RS232 level
3	TXDPC#	Serial Data Out (to PC) – RS232 level
4	COM	GND
5	DCDPC#	Data Carrier Detector – RS232 level
6	RXDPC#	Serial Data In (from PC) – RS232 level
7	DSRPC#	Data Set Ready – RS232 level
8	CTSPC#	Clear To Send– RS232 level

Table 7. RJ45 Console connector pin descriptions

Gold Finger GF1

PIN Num.	Signals	Note
1	GND	
2	UPSVCC	8~15Vdc
3	TXDUPS(to UPS) – RS-232 level	
4	RXDUPS(from UPS) – RS-232 level	
5	NC	
6	NC	
7	NC	
8	D+	Detect+
9	GND	
10	D-	Detect-

Table 8. Gold finger GF1 pin descriptions

TOSHIBA INTERNATIONAL CORPORATION

INDUSTRIAL DIVISION

13131 West Little York Rd., Houston, TX 77041

Tel: 713/466-0277 Fax 713/466-8773

US 877/867-8773 Canada 800/872-2192 Mexico 01/800/527-1204

www.toshiba.com/ind